## **CS401**

# Computer Architecture and Assembly language Programming

## Important mcqs

#### **Lec 1 - Basic Computer Architecture**

- 1. Which of the following is responsible for fetching instructions from memory and executing them?
  - a) ALU
  - b) Control Unit
  - c) Input Unit
  - d) Output Unit

Solution: b) Control Unit

Which component of a CPU stores the results of arithmetic and logical operations?

- a) Cache Memory
- b) Control Unit
- c) ALU
- d) Registers

Solution: d) Registers

Which type of memory can be read from and written to?

- a) ROM
- b) RAM
- c) Cache Memory
- d) Virtual Memory

Solution: b) RAM

#### What is the purpose of the system clock in a computer system?

- a) To synchronize the execution of instructions
- b) To store data
- c) To display the time
- d) To provide power to the system

Solution: a) To synchronize the execution of instructions

Which component is responsible for communicating with input and output devices?

- a) ALU
- b) Control Unit
- c) Input Unit
- d) Output Unit

Solution: c) Input Unit

Which component is responsible for performing arithmetic and logical operations?

a) Control Unit

- b) ALU
- c) Input Unit
- d) Output Unit

#### Solution: b) ALU

#### Which of the following is a type of secondary storage device?

- a) Hard Disk Drive
- b) Cache Memory
- c) RAM
- d) Registers

Solution: a) Hard Disk Drive

#### Which type of memory is non-volatile?

- a) ROM
- b) RAM
- c) Cache Memory
- d) Virtual Memory

Solution: a) ROM

#### Which component of a CPU controls the flow of data between the CPU and memory?

- a) ALU
- b) Control Unit
- c) Input Unit
- d) Output Unit

Solution: b) Control Unit

#### Which of the following is a type of primary memory?

- a) Hard Disk Drive
- b) Optical Disk Drive
- c) Flash Drive
- d) RAM

Solution: d) RAM

## **Lec 2 - Data Declaration**

| 1. | Which keyword is used to declare a variable in C language?  a. int b. float c. char d. all of the above  Answer: d. all of the above     |  |  |  |  |  |
|----|--|--|--|--|--|--|
|    | Which keyword is used to declare a constant in C language?  a. var  b. const  c. let  d. final  Answer: b. const                         |  |  |  |  |  |
|    | Which data type is used to represent characters in C language?  a. char  b. int  c. float d. double  Answer: a. char                     |  |  |  |  |  |
|    | Which data type is used to represent decimal numbers in C language? a. char b. int c. float d. double Answer: c. float                   |  |  |  |  |  |
|    | Which data type is used to represent Boolean values in C language?  a. bool  b. int  c. char  d. float  Answer: C. bool                  |  |  |  |  |  |
|    | Which keyword is used to define a pointer variable in C language?  a. * b. & c. \$ d. # Answer: a. *                                     |  |  |  |  |  |
|    | Which keyword is used to define an array in C language?  a. array  b. list  c. table  d. none of the above  Answer: d. none of the above |  |  |  |  |  |

Which data type is used to represent whole numbers in C language?

a. char

- b. int
- c. float
- d. double

#### Answer: b. int

## Which keyword is used to declare a variable as a constant pointer in C language?

- a. const
- b. static
- c. volatile
- d. extern

#### Answer: a. const

## Which data type is used to represent large numbers in C language?

- a. char
- b. int
- c. long
- d. double

Answer: c. long

#### Lec 3 - Comparison and Conditions

printf("a is between 5 and 15");

```
1. Which operator is used to check for equality in programming languages?
   a) =
   b) ==
   c) ===
   d) !=
   Answer: b) ==
   Which of the following is a relational operator?
   a)!
   b) ||
   c) &&
   d) >
   Answer: d) >
   What is the result of the following comparison in Python: 5 > 3?
   a) True
   b) False
   c) Syntax Error
   d) None of the above
   Answer: a) True
   Which of the following is not a logical operator?
   a)!
   b) ||
   c) <=
   d) &&
   Answer: c) <=
   What is the output of the following code:
   arduino
   Copy code
   int a = 5;
   if (a < 10) {
   printf("a is less than 10");
   }
   a) a is less than 10
   b) a is greater than 10
   c) a is equal to 10
   d) Compilation Error
   Answer: a) a is less than 10
   What is the output of the following code:
   CSS
   Copy code
   int a = 10;
   if (a > 5 \&\& a < 15) {
```

```
}
a) a is between 5 and 15
b) a is less than 5
c) a is greater than 15
d) Compilation Error
Answer: a) a is between 5 and 15
Which of the following control structures is used to execute code based on multiple
conditions?
a) if-else
b) switch-case
c) while
d) for
Answer: b) switch-case
Which of the following is the correct syntax for an if-else statement in C?
a) if (condition) {
// code block
} else {
// code block
b) if (condition)
// code block
else
// code block
c) if (condition)
// code block
else {
// code block
d) if (condition) {
// code block
} else
// code block
Answer: a) if (condition) {
// code block
} else {
// code block
What is the output of the following code:
CSS
Copy code
int a = 5;
int b = 3;
if (a > b) {
 printf("a is greater than b");
```

} else {

printf("a is less than or equal to b");

- a) a is greater than b
- b) a is less than or equal to b
- c) a is equal to b
- d) Compilation Error

## Answer: a) a is greater than b

Which of the following operators is used to check for inequality?

- a)!
- b) ==
- c) !=
- d) <>

Answer: c) !=

## Lec 4 - Multiplication Algorithm

#### 1. Which multiplication algorithm uses a grid-like structure to multiply two numbers?

- A. Traditional method
- B. Lattice multiplication
- C. Egyptian multiplication
- D. Russian peasant multiplication

#### **Answer: B**

#### Which multiplication algorithm is also known as the "double-and-add" method?

- A. Traditional method
- B. Egyptian multiplication
- C. Russian peasant multiplication
- D. None of the above

#### **Answer: C**

#### Which multiplication algorithm is based on repeated addition and subtraction?

- A. Traditional method
- B. Lattice multiplication
- C. Egyptian multiplication
- D. None of the above

#### Answer: A

#### Which multiplication algorithm is used in binary multiplication?

- A. Traditional method
- B. Lattice multiplication
- C. Egyptian multiplication
- D. Russian peasant multiplication

#### Answer: D

#### Which multiplication algorithm is used to multiply large numbers in cryptography?

- A. Traditional method
- B. Lattice multiplication
- C. Egyptian multiplication
- D. Karatsuba algorithm

#### Answer: D

#### Which multiplication algorithm is also known as the "Box Method"?

- A. Traditional method
- B. Lattice multiplication
- C. Egyptian multiplication
- D. Russian peasant multiplication

#### Answer: A

# Which multiplication algorithm uses a series of doublings and halvings to perform multiplication?

- A. Traditional method
- B. Lattice multiplication
- C. Egyptian multiplication
- D. Russian peasant multiplication

#### Answer: D

## Which multiplication algorithm is commonly used in digital signal processing?

- B. Lattice multiplication
- C. Karatsuba algorithm
- D. None of the above

**Answer: B** 

## Which multiplication algorithm is used to multiply complex numbers?

- A. Traditional method
- B. Lattice multiplication
- C. Egyptian multiplication
- D. None of the above

Answer: A

## Which multiplication algorithm is based on the distributive property of multiplication?

- A. Traditional method
- B. Lattice multiplication
- C. Egyptian multiplication
- D. None of the above

Answer: C

## Lec 5 - Program Flow

- 1. Which of the following control structures is used to execute a block of code repeatedly until a specific condition is met?
  - A) if-else statement
  - B) switch statement
  - C) for loop
  - D) while loop

Answer: D) while loop

Which of the following statements is used to transfer control to a different part of the program?

- A) if statement
- B) switch statement
- C) break statement
- D) continue statement

Answer: C) break statement

Which of the following control structures is used to execute a block of code repeatedly for a specific number of times?

- A) if-else statement
- B) switch statement
- C) for loop
- D) while loop

Answer: C) for loop

Which of the following control structures is used to execute a block of code based on the evaluation of a Boolean expression?

- A) if-else statement
- B) switch statement
- C) for loop
- D) while loop

Answer: A) if-else statement

Which of the following statements is used to terminate the current iteration of a loop and continue with the next iteration?

- A) if statement
- B) switch statement
- C) break statement
- D) continue statement

Answer: D) continue statement

Which of the following statements is used to define a default case in a switch statement?

- A) default:
- B) else:
- C) case default:
- D) case else:

Answer: A) default:

Which of the following control structures is used to execute a block of code only if a

#### specific condition is true?

- A) if-else statement
- B) switch statement
- C) for loop
- D) while loop

Answer: A) if-else statement

## Which of the following statements is used to exit a loop when a specific condition is met?

- A) if statement
- B) switch statement
- C) break statement
- D) continue statement

Answer: C) break statement

# Which of the following control structures is used to execute a block of code repeatedly as long as a specific condition is true?

- A) if-else statement
- B) switch statement
- C) for loop
- D) while loop

Answer: D) while loop

# Which of the following statements is used to transfer control to a different part of the program based on a specific condition?

- A) if statement
- B) switch statement
- C) break statement
- D) goto statement

Answer: D) goto statement (Note: goto statement is generally discouraged in modern programming due to its potential to cause confusion and make code harder to read and maintain.)

#### Lec 6 - ASCII Codes

#### 1. What does ASCII stand for?

- A. American Standard Code for Information Interchange
- B. Advanced Standard Code for Internet Interchange
- C. Association of Standardized Computer Information
- D. Automated System Code for Integrated Interchange

#### Answer: A

#### How many bits are used in ASCII code to represent a single character?

- A. 4 bits
- B. 8 bits
- C. 12 bits
- D. 16 bits

#### **Answer: B**

#### Which of the following is NOT included in ASCII code?

- A. Letters (uppercase and lowercase)
- B. Numbers (0-9)
- C. Punctuation marks
- D. Emojis

#### **Answer: D**

#### What is the decimal value for the uppercase letter 'A' in ASCII code?

- A. 65
- B. 97
- C. 72
- D. 90

#### Answer: A

#### Which of the following is an example of a non-printable character in ASCII code?

- A. Space
- B. Tab
- C. Exclamation mark
- D. Letter 'A'

#### Answer: B

## Which of the following is the hexadecimal representation for the binary code 00101011 in ASCII code?

- A. 2B
- B. 3F
- C. 5E
- D. 7D

#### Answer: A

#### What is the decimal value for the symbol '@' in ASCII code?

- A. 42
- B. 64
- C. 75
- D. 98

#### Answer: B

## Which of the following is the ASCII code for the lowercase letter 'e'?

| B. 97   |   |
|---------|---|
| C. 101  |   |
| D. 103  |   |
| Answer: | ( |
|         |   |
| What is | t |
| ۸ 40    |   |

## What is the ASCII code for the digit '8'?

A. 48

B. 56

C. 64

D. 72

Answer: B

## What is the ASCII code for the percent symbol (%)?

A. 35

B. 44

C. 63

D. 37

Answer: D

#### Lec 7 - String Processing

#### 1. What is string processing?

- a) The manipulation of numerical data
- b) The manipulation of textual data
- c) The manipulation of graphical data
- d) The manipulation of audio data

Answer: b) The manipulation of textual data

#### Which data type is used to represent strings in most programming languages?

- a) integer
- b) float
- c) string
- d) boolean

#### Answer: c) string

#### Which function is used to concatenate two strings in Python?

- a) add()
- b) concat()
- c) append()
- d) join()

Answer: d) join()

#### Which function is used to convert a string to uppercase in Java?

- a) toLowerCase()
- b) toUpperCase()
- c) upper()
- d) caseUpper()

Answer: b) toUpperCase()

#### Which function is used to find the length of a string in C++?

- a) strlen()
- b) length()
- c) size()
- d) count()

Answer: a) strlen()

#### Which symbol is used to represent the end of a string in C++?

- a) %
- b) \$
- c) #
- d) \0

Answer: d) \0

#### Which function is used to extract a substring from a string in JavaScript?

- a) extract()
- b) substring()
- c) slice()
- d) splice()

#### Answer: b) substring()

Which function is used to find the position of a substring within a string in Python?

a) find()

b) search()
c) locate()
d) position()
Answer: a) find()
Which operator is used to con

Which operator is used to compare two strings in most programming languages?

- a) ==
- b) =
- c) !=
- d) <

Answer: a) ==

Which function is used to replace a substring with another string in PHP?

- a) replace()
- b) swap()
- c) exchange()
- d) switch()

Answer: a) replace()

#### Lec 8 - Interrupts

#### 1. What is an interrupt?

- A. A type of exception
- B. A type of error
- C. A type of function call
- D. A type of loop

Answer: A

#### Which of the following is not an example of an interrupt?

- A. Keyboard input
- B. Mouse input
- C. Printer output
- D. Timer overflow

**Answer: C** 

#### What is a hardware interrupt?

- A. An interrupt triggered by the CPU
- B. An interrupt triggered by an external device
- C. An interrupt triggered by a software program
- D. An interrupt triggered by a user input

**Answer: B** 

#### What is a software interrupt?

- A. An interrupt triggered by the CPU
- B. An interrupt triggered by an external device
- C. An interrupt triggered by a software program
- D. An interrupt triggered by a user input

Answer: C

#### Which of the following is not a type of interrupt?

- A. Maskable interrupt
- B. Non-maskable interrupt
- C. High-priority interrupt
- D. Low-priority interrupt

**Answer: C** 

#### Which of the following is true about non-maskable interrupts?

- A. They can be disabled by software.
- B. They cannot be disabled by software.
- C. They are triggered by external devices.
- D. They are triggered by software programs.

**Answer: B** 

#### Which of the following is true about maskable interrupts?

- A. They cannot be disabled by software.
- B. They are triggered by external devices.
- C. They are triggered by software programs.
- D. They cannot be prioritized.

**Answer: C** 

#### What is a vectored interrupt?

A. An interrupt with a fixed priority level.

- B. An interrupt with a variable priority level.
- C. An interrupt that shares the same priority level as other interrupts.
- D. An interrupt that has a specific address assigned to it.

Answer: D

#### Which of the following is an example of a non-maskable interrupt?

- A. System call
- B. Timer interrupt
- C. Power failure
- D. Interrupt from a mouse click

**Answer: C** 

## Which of the following is true about interrupt handling?

- A. It must be done in real-time.
- B. It is not a time-critical operation.
- C. It is done by the operating system.
- D. It is not necessary in modern computer systems.

Answer: A

## **Lec 9 - Hardware Interrupts**

#### 1. Which of the following statements is true about hardware interrupts?

- a) They are generated by software instructions.
- b) They are triggered by hardware events.
- c) They are used for system calls.
- d) They are non-maskable interrupts.

Answer: b) They are triggered by hardware events.

#### Which of the following is an example of a hardware interrupt?

- a) A system call
- b) A software exception
- c) A timer expiration
- d) A user input

Answer: c) A timer expiration

## Which of the following is responsible for handling hardware interrupts?

- a) The CPU
- b) The operating system
- c) The interrupt controller
- d) The device driver

Answer: b) The operating system

#### Which of the following is used to prioritize hardware interrupts?

- a) The CPU
- b) The interrupt controller
- c) The device driver
- d) The operating system

Answer: b) The interrupt controller

#### Which of the following statements is true about non-maskable interrupts?

- a) They can be disabled by software.
- b) They are triggered by external devices.
- c) They are used for critical events that cannot be ignored.
- d) They can be handled by interrupt chaining.

Answer: c) They are used for critical events that cannot be ignored.

#### Which of the following is an example of a non-maskable interrupt?

- a) A keyboard input
- b) A mouse input
- c) A power failure
- d) A network error

Answer: c) A power failure

#### Which of the following is responsible for minimizing interrupt latency?

- a) The CPU
- b) The operating system
- c) The interrupt controller
- d) The device driver

Answer: c) The interrupt controller

#### Which of the following techniques is used to handle multiple interrupts of the same type?

a) Interrupt masking

- b) Interrupt priority
- c) Interrupt chaining
- d) Interrupt polling

Answer: c) Interrupt chaining

#### Which of the following statements is true about interrupt chaining?

- a) It is used to handle multiple interrupts of different types.
- b) It is used to handle multiple interrupts of the same type.
- c) It is used to disable hardware interrupts.
- d) It is used to enable hardware interrupts.

Answer: b) It is used to handle multiple interrupts of the same type.

#### Which of the following is an example of a device that generates multiple interrupts?

- a) A printer
- b) A keyboard
- c) A timer
- d) A network card

Answer: d) A network card

## Lec 10 - Debugger using single step interrupt

#### 1. What is a debugger?

- a) A hardware device used to interrupt program execution
- b) A software tool used to identify and fix errors in programs
- c) A programming language

#### Answer: b

#### What is a single step interrupt?

- a) A hardware device used to interrupt program execution
- b) A software tool used to identify and fix errors in programs
- c) A debugging technique that allows programs to be executed one instruction at a time

#### Answer: c

#### What is the purpose of a single step interrupt?

- a) To execute a program faster
- b) To examine the state of the system after each instruction
- c) To skip over sections of code

#### Answer: b

#### What is the advantage of using a single step interrupt?

- a) It allows developers to execute a program faster
- b) It allows developers to examine the state of the system after each instruction
- c) It allows developers to skip over sections of code

#### Answer: b

#### How does a debugger work?

- a) By interrupting program execution
- b) By executing programs one instruction at a time
- c) By examining the state of the system after each instruction

#### Answer: c

## Which debugging technique allows programs to be executed one instruction at a time?

- a) Single step interrupt
- b) Breakpoint
- c) Watchpoint

#### Answer: a

#### What is the purpose of a breakpoint?

- a) To execute a program faster
- b) To examine the state of the system after each instruction
- c) To pause program execution at a specific point in the code

#### Answer: c

#### What is a watchpoint?

- a) A hardware device used to interrupt program execution
- b) A software tool used to identify and fix errors in programs
- c) A debugging technique that pauses program execution when a specific memory location is accessed

#### Answer: c

#### Which debugging technique pauses program execution at a specific point in the code?

a) Single step interrupt

- b) Breakpoint
- c) Watchpoint

## Answer: b

## What is the main advantage of using a debugger?

- a) It allows developers to execute programs faster
- b) It allows developers to identify and fix errors in their programs
- c) It allows developers to skip over sections of code

Answer: b

#### Lec 11 - Concepts of Multitasking

- 1. Which of the following is a key cognitive process involved in multitasking?
  - A) Perception
  - B) Memory
  - C) Attention
  - D) Language

Answer: C) Attention

#### What is the term for the ability to switch between tasks quickly?

- A) Task orientation
- B) Task switching
- C) Task management
- D) Task prioritization

Answer: B) Task switching

#### Which of the following is a potential downside of multitasking?

- A) Increased productivity
- B) Decreased stress levels
- C) Increased errors and decreased performance
- D) Increased creativity

Answer: C) Increased errors and decreased performance

#### What is the term for the phenomenon where multitasking reduces overall performance?

- A) Cognitive overload
- B) Task interference
- C) Multitasking deficit
- D) Attentional bias

Answer: C) Multitasking deficit

#### Which of the following is an example of concurrent multitasking?

- A) Listening to music while studying
- B) Switching between two different homework assignments
- C) Talking on the phone while driving
- D) None of the above

Answer: C) Talking on the phone while driving

# Which of the following is a factor that can affect an individual's ability to multitask effectively?

- A) Age
- B) Gender
- C) Personality
- D) All of the above

Answer: D) All of the above

#### Which of the following is a strategy that can help individuals manage multitasking?

- A) Setting clear priorities
- B) Avoiding interruptions
- C) Using technology to automate tasks
- D) All of the above

Answer: D) All of the above

## What is the term for the amount of information that can be held in working memory?

A) Capacity

- B) Duration
- C) Encoding
- D) Retrieval

Answer: A) Capacity

## Which of the following is a type of multitasking that can be beneficial?

- A) Sequential multitasking
- B) Concurrent multitasking
- C) Task switching
- D) None of the above

Answer: A) Sequential multitasking

# Which of the following is an example of a technology design that can facilitate multitasking?

- A) A task manager app
- B) A social media platform
- C) A video game
- D) None of the above

Answer: A) A task manager app

#### Lec 12 - BIOS Video Services

#### 1. Which of the following is NOT a function of BIOS Video Services?

- a) Initializing the video hardware
- b) Changing the video mode
- c) Drawing characters and graphics on the screen
- d) Loading the operating system

Answer: d) Loading the operating system

#### What does BIOS stand for?

- a) Basic Input/Output System
- b) Basic Information Operating System
- c) Binary Input/Output Service
- d) Binary Information Operating System

Answer: a) Basic Input/Output System

#### Which of the following is responsible for interacting with the video display hardware?

- a) BIOS Video Services
- b) Operating System
- c) Motherboard
- d) CPU

Answer: a) BIOS Video Services

#### Which function of BIOS Video Services allows changing the screen resolution?

- a) SetMode
- b) DrawString
- c) InitDisplay
- d) ScrollScreen

Answer: a) SetMode

#### Which of the following is a standard video mode supported by BIOS Video Services?

- a) 1024x768
- b) 1280x720
- c) 1366x768
- d) All of the above

Answer: d) All of the above

#### Which function of BIOS Video Services is used to clear the screen?

- a) SetColor
- b) ClearScreen
- c) DrawString
- d) SetMode

Answer: b) ClearScreen

#### Which of the following is NOT a video display hardware?

- a) Monitor
- b) Graphics Card
- c) Keyboard
- d) Integrated Graphics

Answer: c) Keyboard

#### Which function of BIOS Video Services is used to draw a rectangle on the screen?

a) DrawString

- b) DrawPixel
- c) DrawLine
- d) DrawRectangle

## Answer: d) DrawRectangle

## Which of the following is responsible for controlling the boot-up process?

- a) Operating System
- b) BIOS
- c) Graphics Card
- d) CPU

Answer: b) BIOS

## Which function of BIOS Video Services is used to scroll the screen up or down?

- a) SetMode
- b) DrawString
- c) ScrollScreen
- d) DrawPixel

Answer: c) ScrollScreen

#### **Lec 13 - Physical Formation**

#### 1. Which of the following is NOT an example of physical formation?

- a) Mountain formation through plate tectonics
- b) Glacier formation due to climate change
- c) Building construction by humans
- d) Erosion of rocks by water

Solution: c) Building construction by humans

#### Which of the following is a result of erosion?

- a) Formation of volcanoes
- b) Formation of mountains
- c) Formation of canyons
- d) Formation of caves

Solution: c) Formation of canyons

#### The process of lithification involves:

- a) Formation of igneous rocks from molten magma
- b) Formation of sedimentary rocks from loose sediments
- c) Formation of metamorphic rocks from pre-existing rocks
- d) Formation of minerals through precipitation from water

Solution: b) Formation of sedimentary rocks from loose sediments

#### Which of the following is an example of a constructive force of nature?

- a) Earthquakes
- b) Volcanic eruptions
- c) Glacial movements
- d) Deposition of sediment by wind or water

Solution: d) Deposition of sediment by wind or water

#### The movement of tectonic plates is driven by:

- a) Gravity
- b) Solar radiation
- c) Convection currents in the mantle
- d) Magnetic fields

Solution: c) Convection currents in the mantle

#### Which of the following is NOT a type of rock?

- a) Granite
- b) Sandstone
- c) Quartz
- d) Iron

Solution: d) Iron

# Which of the following processes is responsible for the formation of stalactites and stalagmites in caves?

- a) Erosion
- b) Deposition
- c) Weathering
- d) Melting

Solution: b) Deposition

## The Grand Canyon in the United States was formed primarily by:

a) Volcanic activity

- b) Erosion by wind
- c) Erosion by water
- d) Plate tectonics

Solution: c) Erosion by water

# Which of the following is a type of volcano that has steep slopes and explosive eruptions?

- a) Shield volcano
- b) Composite volcano
- c) Caldera volcano
- d) Cinder cone volcano

Solution: b) Composite volcano

## The process of weathering can be caused by:

- a) Chemical reactions
- b) Physical forces
- c) Biological activity
- d) All of the above

Solution: d) All of the above

#### Lec 14 - Introduction

#### 1. What is the purpose of an introduction?

- A) To provide context and background information
- B) To make an argument
- C) To provide a conclusion
- D) None of the above

Solution: A

#### What should be included in an introduction?

- A) A thesis statement
- B) An overview of key points
- C) Background information
- D) All of the above

Solution: D

#### What is a thesis statement?

- A) A summary of the entire work
- B) A statement of the main argument or point
- C) A conclusion
- D) None of the above

Solution: B

#### Which of the following is NOT a common way to start an introduction?

- A) Anecdote
- B) Quotation
- C) Summary of the conclusion
- D) Shocking fact or statistic

Solution: C

#### What is the purpose of an attention-getter in the introduction?

- A) To engage the reader or audience
- B) To provide context and background information
- C) To make an argument
- D) None of the above

Solution: A

#### How long should an introduction be?

- A) One sentence
- B) One paragraph
- C) One page
- D) It depends on the length of the work

Solution: D

#### What is the purpose of a hook in the introduction?

- A) To engage the reader or audience
- B) To provide context and background information
- C) To make an argument
- D) None of the above

Solution: A

#### Which of the following is a common mistake to avoid in the introduction?

A) Being too general

- B) Being too specific
- C) Using jargon or technical terms
- D) All of the above

Solution: A

#### What is the purpose of a roadmap in the introduction?

- A) To provide context and background information
- B) To make an argument
- C) To provide an overview of key points
- D) None of the above

Solution: C

#### Which of the following is a key element of a strong introduction?

- A) Clear and concise language
- B) A compelling hook
- C) A thesis statement
- D) All of the above

Solution: D

#### Lec 15 - Introduction 2

#### 1. What is the purpose of an introduction?

- A) To provide context and background information
- B) To make an argument
- C) To provide a conclusion
- D) None of the above

Solution: A

#### What should be included in an introduction?

- A) A thesis statement
- B) An overview of key points
- C) Background information
- D) All of the above

Solution: D

#### What is a thesis statement?

- A) A summary of the entire work
- B) A statement of the main argument or point
- C) A conclusion
- D) None of the above

Solution: B

#### Which of the following is NOT a common way to start an introduction?

- A) Anecdote
- B) Quotation
- C) Summary of the conclusion
- D) Shocking fact or statistic

Solution: C

#### What is the purpose of an attention-getter in the introduction?

- A) To engage the reader or audience
- B) To provide context and background information
- C) To make an argument
- D) None of the above

Solution: A

#### How long should an introduction be?

- A) One sentence
- B) One paragraph
- C) One page
- D) It depends on the length of the work

Solution: D

#### What is the purpose of a hook in the introduction?

- A) To engage the reader or audience
- B) To provide context and background information
- C) To make an argument
- D) None of the above

Solution: A

#### Which of the following is a common mistake to avoid in the introduction?

A) Being too general

- B) Being too specific
- C) Using jargon or technical terms
- D) All of the above

Solution: A

#### What is the purpose of a roadmap in the introduction?

- A) To provide context and background information
- B) To make an argument
- C) To provide an overview of key points
- D) None of the above

Solution: C

#### Which of the following is a key element of a strong introduction?

- A) Clear and concise language
- B) A compelling hook
- C) A thesis statement
- D) All of the above

Solution: D

#### **Lec 16 - Calling Conventions**

#### 1. What is a calling convention?

- a. A set of rules for how a program calls a function and returns from it.
- b. A set of rules for naming variables in a program.
- c. A set of rules for how a program handles errors.
- d. A set of rules for how a program allocates memory.

#### Solution: a.

#### Which of the following is not an example of a calling convention?

- a. cdecl
- b. stdcall
- c. fastcall
- d. objectcall

#### Solution: d.

# Which of the following is a common calling convention used by the Windows operating system?

- a. cdecl
- b. stdcall
- c. fastcall
- d. objectcall

#### Solution: b.

# In which direction are function arguments typically pushed onto the stack in the cdecl calling convention?

- a. Left to right
- b. Right to left
- c. Top to bottom
- d. Bottom to top

#### Solution: b.

## Which of the following is an advantage of the fastcall calling convention?

- a. It allows for more flexible use of registers.
- b. It simplifies the process of passing arguments.
- c. It ensures that functions are always called in the same way.
- d. It reduces the size of the compiled code.

#### Solution: a.

## Which calling convention is commonly used by C++ compilers?

- a. cdecl
- b. stdcall
- c. thiscall
- d. objectcall

#### Solution: c.

# In which calling convention are the first two function arguments typically passed in registers?

- a. cdecl
- b. stdcall

- c. fastcall
- d. thiscall

#### Solution: c.

#### Which of the following is a disadvantage of the stdcall calling convention?

- a. It is not supported on all architectures.
- b. It can cause problems with inter-language calling.
- c. It can lead to stack overflow errors.
- d. It is slower than other calling conventions.

#### Solution: b.

#### Which calling convention is commonly used by the Linux operating system?

- a. cdecl
- b. stdcall
- c. fastcall
- d. systemcall

#### Solution: a.

#### Which of the following is a characteristic of a good calling convention?

- a. It is consistent across different programming languages.
- b. It allows for efficient use of registers.
- c. It minimizes the size of the compiled code.
- d. All of the above.

#### Solution: d.

## **Lec 17 - Motorolla 68K Processors**

| 1. | What is the data bus width of the Motorola 68K processor?  A) 8 bits B) 16 bits C) 32 bits D) 64 bits Answer: C) 32 bits  |
|----|---|
|    | What was the maximum clock speed of the Motorola 68000 processor?  A) 2 MHz B) 8 MHz C) 16 MHz D) 33 MHz Answer: C) 16 MHz  |
|    | Which addressing mode of the 68K processor allows for the addressing of data using a displacement relative to the program counter?  A) Register addressing B) Immediate addressing C) Relative addressing D) Absolute addressing Answer: C) Relative addressing |
|    | Which version of the 68K processor introduced support for virtual memory?  A) 68000 B) 68010 C) 68020 D) 68030 Answer: C) 68020   |
|    | Which of the following is not a register in the 68K processor?  A) A0  B) D7  C) PC  D) SP  Answer: B) D7   |
|    | What is the maximum amount of memory that can be addressed by the 68K processor?  A) 1 MB B) 4 GB C) 16 MB D) 4 TB Answer: B) 4 GB  |
|    | Which instruction set architecture is used by the 68K processor?  A) CISC  B) RISC  C) VLIW  D) EPIC  |

Which of the following is not a member of the 68K processor family?

Answer: A) CISC

B) 68010

C) 68030

D) 68060

Answer: D) 68060

#### Which interrupt handling method is used by the 68K processor?

- A) Polling
- B) Daisy chaining
- C) Vectored interrupt
- D) Direct memory access

Answer: C) Vectored interrupt

## Which operating system was not supported by the Motorola 68K processor?

- A) Mac OS
- B) Windows
- C) AmigaOS
- D) Unix

**Answer: B) Windows**