

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

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) {
    printf("a is between 5 and 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: C

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 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 - Motorola 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

Answer: A) CISC

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

- 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**

