**Assignment – 2**

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Class : TY CSE

PRN : 22510034 Batch : T-3

**(Operators and Control flow)**

// 1. Basic Arithmetic Operations

let a = 10

let b = 5

print("Addition: \(a + b)")

print("Subtraction: \(a - b)")

print("Multiplication: \(a \* b)")

print("Division: \(a / b)")

// 2. Compound Assignment Operators

var num = 10

num += 5

print("After += : \(num)")

num -= 3

print("After -= : \(num)")

num \*= 2

print("After \*= : \(num)")

num /= 4

print("After /= : \(num)")

// 3. Operator Precedence

let X = 2, Y = 3, Z = 4

print("X + Y \* Z = \(X + Y \* Z)")

print("(X + Y) \* Z = \((X + Y) \* Z)")

// 4. Convert Int to Double and Multiply

let intVal: Int = 7

let doubleVal: Double = Double(intVal) \* 2.5

print("Multiplication result: \(doubleVal)")

// 5. Convert Double to Int

let doubleNum: Double = 9.8

let intPart: Int = Int(doubleNum)

print("Integer part: \(intPart)")

// 6. Even or Odd

let number = 15

if number % 2 == 0 {

print("\(number) is even")

} else {

print("\(number) is odd")

}

// 7. Grading System

let score = 85

if score >= 90 {

print("Grade: A")

} else if score >= 80 {

print("Grade: B")

} else if score >= 70 {

print("Grade: C")

} else if score >= 60 {

print("Grade: D")

} else {

print("Grade: F")

}

// 8. Username & Password Check

let username = "admin"

let password = "1234"

if username == "admin" && password == "1234" {

print("Login successful")

} else {

print("Invalid credentials")

}

// 9. Day of the Week

let dayNumber = 3

switch dayNumber {

case 1: print("Monday")

case 2: print("Tuesday")

case 3: print("Wednesday")

case 4: print("Thursday")

case 5: print("Friday")

case 6: print("Saturday")

case 7: print("Sunday")

default: print("Invalid day")

}

// 10. Find Largest Number

let num1 = 12, num2 = 25, num3 = 18

if num1 >= num2 && num1 >= num3 {

print("Largest: \(num1)")

} else if num2 >= num1 && num2 >= num3 {

print("Largest: \(num2)")

} else {

print("Largest: \(num3)")

}

// 11. Voting Eligibility

let age = 20

let isCitizen = true

if age >= 18 && isCitizen {

print("Eligible to vote")

} else {

print("Not eligible to vote")

}

// 12. Discount Eligibility

let isStudent = false

let isSenior = true

if isStudent || isSenior {

print("Eligible for discount")

} else {

print("Not eligible for discount")

}

// 13. Boolean Constants

let isSmallNumber = number < 10

print("isSmallNumber: \(isSmallNumber)")

let speedLimit = 65

let currentSpeed = 72

let isSpeeding = currentSpeed > speedLimit

print("isSpeeding: \(isSpeeding)")

// 14. Age Classification

switch age {

case 0...12: print("Child")

case 13...19: print("Teenager")

case 20...64: print("Adult")

case 65...: print("Senior")

default: print("Invalid age")

}

// 15. Weekday or Weekend

let day = "Sunday"

switch day {

case "Monday", "Tuesday", "Wednesday", "Thursday", "Friday":

print("Weekday")

case "Saturday", "Sunday":

print("Weekend")

default:

print("Invalid day")

}