**IOS Mid**

**F2017065009**

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**Q3:**

@IBOutlet is used to make a variable of the ui-object which we link from our storyboard to viewController. The data type of the display is optional UILable and if we change display:UILable? To display:UILable! We do not need to unwrap the display whenever we want to use. We could use it directly.

Q4:

Data type of currentTitle is sting optional. ! means that it is implicitly unwrapping the title.

Q5:

We define userIsInTheMiddleOfTyping because initially there was 0 in the label and we need to remove that 0 when we start typing and when we take square-root or use any other operation like that we need to clear the screen when user start typing again so if userIsInTheMiddleOfTyping is false it will clear the screen when the user will enter any value.

Q6:

Data type of text at line 13 is string optional. We use ! at line 13 because we are implicitly un-wrapping and in implicitly un-wrapping we need to un-wrap it once only that’s why we are not using it at line 14.

Q7:

We just select the digit buttons press control and drag it from storyboard to ViewController class and select its type as action to make touchDigit method same is the case with performOperation. Now whenever we click on a digit like (1,2,3…) touchDigit method will be called and whenever we touch on buttons like pi or sqt performOperation will be called.

Q8:

We make it false because after performing any operation on some values we need to clear its result to enter new values.

Q9,Q10:

At line 31 we are setting the value of pi at the label and at line 33 we are converting the text of the label to Double and setting it in operand constant.

**Q1:**

UIKit acts like a manger which mange the interaction of user to the system and provide us classes which make us attract with the resources of the application.

**Q2:**

UiViewController deals the ViewController class which is liable for all the processing.

ViewController is the single root view which contains sub views.

Question 2

Roll#: let roll = F2017065009

CNIC: let cnic = 35201-4999192-9

firstName: let firstName = “Muhammad”

lastName: let lastName = “Tayyab”

fatherName: let fatherName = “Imran”

BloodGroup: let bloodGroup:String? = B+

Email: let email = F2017065009@umt.edu.pk

phoneNumber: let phoneNumber:String? = 03344227779

Degree Program: let degreeProgram = “BSSE”

Address: let address: String? = “Lahore”

SGPA: let SGPA: Int? = nill

Number of semesters completed: let numOfSemetersCompleted: Int? = nill

CGPA: let CGPA: Int? = nill

Question 3

fun StudentDetails(){

let student = (rollNo:“F1”, cnic:”45-54-54-5”, firstName:”Muhammad”, lastName:”Tayyab”, fatherName:”Imran”, bloodGroup:”O+”, email:”abc@gmail.com”, phoneNumber:”033554”, degreeProgram:”BSCS”, Address:”Lahore”, sgpa:”3.0”, numberOfSemestersCompleted:”7”, cgpa:”3.5”)

return student

}

let students = StudentDetails()

print(“Details are: \(students.0) \(students.1) \(students.2) \(students.3) \(students.4) \(students.5) \(students.6) \(students.7) \(students.8) \(students.9) \(students.10) \(students.11) \(students.12)”)

print(“Details are: \(students.rollNo) \(students.cnic) \(students.firstName) \(students.lastName) \(students.fatherName) \(students.bloodGroup) \(students.email) \(students.phoneNumber) \(students.degreeProgram) \(students.Address) \(students.sgpa) \(students.numberOfSemestersCompleted\(students.cgpa))”)