School of Computing Science and Engineering
Bachelor of Technology in Computer Science and Engineering
Mid Term Examination - May 2024

Duration : 90 Minutes
Max Marks : 50

Sem VI - R1UC612C - Swift App Development

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1) What advantages does a playground offer to developers working with Swift? — K2 (2)

2) Describe the underlying differences on implementing Structs and Classes in Swift. — K1 (3)

3) Discuss the various control flow transfer mechanisms in Swift, highlighting their purposes and influence on program execution. — K2 (4)

4) Define a function in Swift and develop a program that calculates the factorial of a number using this function. Emphasize the significance of abstraction and modular programming in the context of this calculation. — K2 (6)

5) Discuss the concept of a "modern language" in the context of programming, elucidating its distinguishing features and their impact on code development and maintenance. — K3 (6)

6) Identify and explain the essential features of computed properties in Swift, exemplifying the creation of a computed property within a Swift struct. Showcase their practicality in dynamic data manipulation. — K3 (9)

7) Differentiate between a closed loop and an open loop. Subsequently, showcase your comprehension by implementing a for-in loop in Swift. Iterate through values from 1 to 100 and print each of these values. — K4 (8)

8) Develop a Swift program simulating the life of a virtual pet, incorporating features for feeding, playing, and monitoring the pet's mood. Utilize fundamental Swift data types and control flow statements for the simulation. — K4 (12)

OR

Imagine you're going to dinner with friends and are struggling to decide where to go. Two of you have very strong opinions and have clearly laid out your requirements for dinner as follows: You want to eat somewhere that has either burger or pizza Your friend wants to eat somewhere with vegan options. Another friend brings up a restaurant she thinks will fit both of your criteria. This restaurant's attributes are represented by a few constants below. Write an if-else statement that will print "Let's go!" if the restaurant's attributes match the group's dietary requirements, and otherwise will print "Sorry, we'll have to think of somewhere else." — K4 (12)