

TY CSE AY-2024-25 Sem-II

Sub: iOS Lab (6CS381)

Assignment No 6

Due date- 24/2/2025

(Class, Inheritance, Collection and Loops)

1. Create a class Car with properties: brand, model, and year.
Add an initializer to set these properties.
Create an object and print the car details.
2. Modify the above Car class to include a method displayDetails () that prints all details of the car.
Call this method for an instance.
Add a computed property carAge that calculates the car's age based on the current year.
3. Create a subclass ElectricCar that inherits from Car.
Add a new property batteryCapacity.
Override the displayDetails () method to include battery capacity.
4. Create a class Animal with properties name and age. Provide a designated initializer for this class.
Create a subclass Dog that inherits from Animal. Override the initializer in the Dog class to also initialize a new property breed.
Test the class by creating an instance of Dog with all three properties: name, age, and breed.
5. Create a class Laptop with properties brand, processor, and ramSize. Add a designated initializer to this class.
Create a subclass GamingLaptop that inherits from Laptop. Override the initializer to include an additional property graphicsCard and provide a default value for ramSize.
Create an instance of GamingLaptop and print all its properties.
6. Create an array of integers as
var numbers= [1, -3, 50, 72, -95, 115]
identify whether 72 and 95 are part of the array or not. Print the result.
7. Create myArray of 20 elements with default value as 0, Display myArray elements.
8. Create an array fruits which contains names of fruits. Identify whether the array is empty or not. If not then find the number of elements present in an array. Print the result.
9. Create an array var cricketers = ["Sachin", "Rahul", "Rohit", "Virat"]

- Update “Sachine” with “Yuvraj”
 - Add “Shubhaman” using append method
 - Add [“Ravindra”, “Hardik”] using + operator
 - Insert “Suresh” at position 5.
 - Remove name at position 4
 - Remove last cricketer
 - Display cricketers
10. Create an nameAge array which contain array of cricketers and array of ages. Display name and age of Frist cricketer in array.
 11. Create a dictionary var scores = ["Sachine ": 50000, " Hardik ": 4000, " Ravindra ": 8000] and display details.
 12. Add “Virat” with 25000 and Update score of Hardik to 9000 also display old score of Hardik.
 13. Remove Sachine from the dictionary and print his score at the time of deletion then print the remaining elements.
 14. Create two separate arrays from this dictionary and display the details.
 15. Create an array of strings containing the names of 5 cities.
Write a for loop to print each city name on a new line.
 16. Write a for loop to calculate the factorial of a given number. For example, factorial of 5 = 5 * 4 * 3 * 2 * 1.
 17. Create dictionary let vehicles = ["unicycle" : 1, "bicycle" : 2, "tricycle" : 3, "quad bike" : 4], using for loop display message as vehicle – has – wheels.
 18. Write a while loop that checks if a given number is prime. If it's prime, print "Prime", otherwise print "Not prime".
 19. Write a while loop to reverse a given integer. For example, if the input is 1234, the output should be 4321.
 20. Write a while loop that checks if a given number is an Armstrong number. A number is Armstrong if the sum of its digits raised to the power of the number of digits is equal to the number itself. For example, 153 is an Armstrong number.
