2_OOP-2: Object Oriented Features ASYNC (2 Hours)

Learning Objectives	- What is Inheritance - What is Polymorphism - What is Abstraction - How to implement chaining

Time	Activity
(3 min)	**OPENING**
(1 hours 45 min)	**CONTENT**
(10 min)	**DEBRIEF**
(2 min)	**CLOSING**

OPENING (3 min)

Activity Type	Reading
Framing Text	Welcome to this session in which you be able to work on some advance functions In this section you will be able to work on programming question that will help you to understand JavaScript programming well. You have to complete all the questions By the end of this session, you will be able to: - Use different methods of implementing Inheritance. - Implement Polymorphism - Implement Abstraction - Use method Channing
Assets	n/a

CONTENT (1 hours 10 min)

Activity Type	Coding
Framing Text	This will take you approximately **2 hours** to complete. After completing it, you will return to code files by zipping in the folders for a debrief. **Complete:** Happy coding! **Note**: Please reach out to instructors asking for help if you get stuck with understanding of questions
Assets	**Task 1:** ● Define a class named Payment that contains a member variable that stores the amount of the payment. ● Also create a member function named paymentDetails that outputs an English sentence describing the ● amount of the payment. ● Next, define a class named CashPayment that is derived from Payment . This class should redefine the paymentDetails function to indicate that the payment is in cash. Include appropriate constructor. ● Define a class named CardPayment that is derived from Payment . This class should redefine the paymentDetails function to indicate that the payment is with card. Include appropriate constructor. ● Separately define a class named CreditCards. This class should contain member variables for the name on the card, expiration date, and credit card number. Include appropriate constructor. associate this class with ● CardPayment class to enable customers to pay with cards. Finally, redefine the paymentDetails function to include all credit card information in the printout. ● Create a main function that creates at least two CashPayment and two CardPayment objects with different ● values in a list and calls to paymentDetails for each. Hint: Abstraction and polymorphic behavior should ● be mentioned. **Task 2:** ● Write a program by creating an Employee class having the following functions and print the final salary. Having attributes salary and number of hours of work per day.

- Create getter and setter for the attributes
- 'getInfo()' which displays the salary, number of hours of work per day of employee.
- 'AddSal()' which adds $10 to the salary of the employee if it is less than $500.
- 'AddWork()' which adds $5 to the salary of the employee if the number of hours of work per day is more than 6 hours.
- Create objects to test these functions.

Task 3:
- Write a program in which you are create a parent function "Game". This function will have method info() in which you will return string "I love game and sports"
- Make 2 child classes "Cricket" and "Football" of parent "Game" and create overridden info methods for both classes and return string "I love cricket" and "I love football".
- Create objects for all of the classes and display print the value in console.

Task 4:
- Create a class "Car" with method *setName , setMake, setColor, setSpeed* and *print*. Create an object for Class Car and use method Channing to set all the values and display the value with *print* method.s

DEBRIEF (15 min)

Activity Type:	Discussion Forum
Assets:	● n/a