



## .Net Core Assignment

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### MODULE 1

1. What is C#?
2. Can we use keywords as an identifier? Why?
3. Create a program to differentiate explicit and implicit conversation.
4. Create program to sort string in descending order
5. Explain any 5 string operation methods
6. Write a program to perform below series and patterns
  - a.  $1+4+9+16+25+.....$
  - b.  $1+1+2+3+5+8+.....$
  - c.  $1+5+14+30+55+.....$
7. Solve the following patterns-
  - a.  
1  
2 3  
4 5 6  
7 8 9 10
  - b.  
\*  
# #  
\* \* \*  
# # # #  
\* \* \* \* \*
  - c.  
\*  
\* #  
\* # \*  
\* # \* #  
\* # \* # \* #
  - d.  
\*  
\* \*  
\* \* \*  
\* \* \* \*  
\* \* \* \* \*
  - e.  
1  
2 2  
3 3 3  
4 4 4 4  
5 5 5 5 5



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f. 1  
1 2  
1 2 3  
1 2 3 4  
1 2 3 4 5

8. Write a program to call method of parent class.
9. Write a program to get three subject marks details and then show average and sum using class.
10. Write a program to calculate factorial number of user defined function.
11. Write a program of Addition, Subtraction, Division, Multiplication using constructor.
12. Write a program to calculate the area of circle, rectangle and triangle using Function Overloading (Hint: Circle:  $\pi * r * r$ ; Rectangle:  $L * B$ ; Triangle:  $\frac{1}{2} * B * H$ )
13. Write a program to perform an example of data hiding.
14. How can we manage runtime errors?
15. What is abstract class?
16. What is dll?
17. What is namespace?
18. Create program to replace specific word from string.
19. What is difference between for loop and foreach loop.
20. Write a program to call static method using class.
21. Write a program to implement multilevel inheritance.
22. Write a program to get 10 Employee details including name, salary, department and show name and designation whose salary is highest.
23. Write a program to implement multiple inheritance.
24. Assume a class cricketer is declared. Declare a derived class batsman from cricketer. Data member of batsman. Total runs, Average runs and best performance. Member functions input data, calculate average runs, Display data.
25. Create a class person having members name and age. Derive a class student having member percentage. Derive another class teacher having member salary. Write necessary member function to initialize, read and write data.
26. Assume that the test results of a batch of students are stored in three different classes. Class Students stores the roll number. Class Test stores the marks obtained in two subjects and class result contains the total marks obtained in the test. The class result can inherit the details of the marks obtained in the test and roll number of students.
27. Write a program to access private variables outside of class.
28. Write a program to divide class definition into multiple parts. (Partial Class)



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29. Assume that a bank maintains two kinds of accounts for customer, one called as saving account and other as current accounts provides Simple interest and withdraw facilities but no cheque book facility. The current account provides cheque book facility but no interest. Current account holders should maintain a minimum balance and if the balance falls below this level a service charges is imposed.

Create a class account that stores customer name, account number and type of account. From this derive classes curr\_acc and sav\_acct to make them more specific to their requirements Include necessary member functions in order to achieve the following tasks

- a. Accepts deposit from a customer and update balance.
- b. Display the balance.
- c. Compute and deposit interest.
- d. Permit withdraws and updates the balance.
- e. Check for the minimum balance, impose penalty, necessary and update the balance.

30. What is dictionary? Advantages of Dictionary?

31. How to prevent class to be instantiate?

32. Create program to replace specific character from string

33. What is difference between array and list?

34. Write a program to define base class with fixed method signature and implement them into derived class. (Interface)

35. Write a program to Get 10 random numbers using parent class and implement one method in derived class to show them in ascending manner.

36. Write a program to prevent class from being instantiated.

37. Write a program to show details of 10 products including Product Name, Product Price, Qty to user and provide them ability to make order with qty and show final amount of bill.

38. Create a program to store students details using Dictionary.

39. What is generics? Explain with example

## **MODULE 2**

1. What is .net Core?
  2. What is Core CLR?
  3. What is role of client?
  4. What is role of server?
  5. What is client server architecture?
  6. What is role of compiler?
  7. What is difference between Compiler and Interpreter?
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8. How is .Net Core different from .Net Framework?
9. What is MVC?
10. What is communication protocol and what is difference between HTTP and HTTPS?
11. Explain Services in .Net Core?
12. Explain Middleware Components?
13. Explain What is Request Pipeline?
14. Explain MVC application life cycle.
15. Where do you find the Middleware in .Net Core?
16. What is difference between Asp.Net webform and .Net Core?

### **MODULE 3**

1. What is model?
2. Explain working of MVC Pattern.
3. what is routing in MVC?
4. What is a View?
5. What is the importance of Controller?
6. What is difference between MVC and Web Forms?
7. Explain what is Model.
8. How is Model different from DataLayer of WebForm?
9. Explain the concept of MVC Scaffolding?
10. What is RouteData and how to access its values?
11. Create an application to demonstrate passing of model to view using scaffolding Templates.
12. Differences between Razor and ASPX View Engine in MVC?
13. Explain various return types of an action method.
14. What is Razor in MVC?
15. Explain custom middleware and where to add.
16. Create an application to add a Custom Middleware class and call it from the view.
17. Why is Layout page important?
18. Download a Template from the Internet and integrate it into an application.
19. What are sections?
20. Create a section in the layout page and call it in the derived views.

### **MODULE 4**

1. Explain Dependency Injection.
2. Explain various types of Dependency Injection.



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3. Create an application to add a custom service which display data from database using Dependency Injection.
4. What is session? What is the default time for session?
5. How to change time of session?
6. What is Partial View in MVC? With example
7. Create an application show Employees data from database on view using Partial view.
8. What is query string? What are disadvantages of query string?
9. What is cookie? What are limitations for cookie?
10. Create an application to store data in session and show on another view
11. Create an application to pass values from one view to another view using query string
12. what is the difference between Temp data, View, and View Bag?
13. Create an application to demonstrate how TempData is different from ViewData.
14. What is the use of Areas in MVC?
15. Create an application to implement various validations using Javascript, jQuery and DataAnnotation.
16. What is difference between javascript and jquery?
17. What is difference between Linq and Entity Framework?
18. Create One Registration Page for Student Registration Model Class and When Student Click on Submit Button, Details of student must be display on same page. Fields: First Name, Last Name, Email id, Mobile, Gender, City, Address, Course (Dropdown list), Fees, Tax (Label with Text 12.50%), Total Fees.
19. Create View Model for CRUD Operation in Country, State and City Table with validation using EF.
20. Create Multiple Image Upload Example, Image Display after Upload. (Use Database table for save data like image name, size, type, URL)
21. Write a program to perform join on two Lists.
22. Demonstrate ModelBinding in .Net Core 1) Bind only 1 property. 2) Exclude 1 property from Binding.
23. Explain various Tag Helpers and its use.
24. Create an application to perform CRUD operation using Tag Helpers.
25. Explain hoe Tag Helpers are different from Razor Controls.

### **MODULE 5**

1. What is AppSettings.json file and AppSettings.Development.json?
2. What are required attributes for Ajax call?
3. What is JsonResult Type in MVC?



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4. What is Nuget package?
5. What is the use of AJAX?
6. Explain View Components.
7. How are View Components different from Partial View?
8. Create a View Components for Login functionality.
9. Create insert/update/delete/view on same view using ajax.
10. How is Code first different from database first approach?
11. Explain the use of Migration.
12. Create another view component and call using following methods
  - a. Component Property
  - b. Tag helper
13. Create a separate view for the above view component.
14. What are Filters?
15. Create a custom Exception handler using filters.

### **MODULE 6**

1. What is web service?
2. What is request and response?
3. What is IIS?
4. What are the types of webservice?
5. What is XML and Json?
6. What are Async and Await?
7. Parse the following from client side as well as server side-  
<https://restcountries.eu/rest/v2/all>
8. Create application for creating web api services for CRUD operation.
9. Create another application to consume the above created api and perform crud operation using web api.