```
1.) Write a program to show function overloading
   "m L#
  Source lode:
   using System;
   namespace Assignment 1
      Claus Function Overloading
         static int Area (int 1) => 1 *1;
        static int Area (int 1, int b) => 1 x b;
         static void Main (string[] aggs)
           Console. Writeline (4" The area of square with
               length 5 is of Area (5) 4");
           Console. Write line ($" The area of rectangle with
                length 5 and breadth 7 is { Area (5,7) 5");
            Console. Readkey ();
    Output:
    The area of square with length 5 is 25
    The area of rectangle with length 5 and breadth 7
     is 35
```

```
Write a program to show Inheritance in C#.
Source lode:
 class Inheritance Test
      public class Animal
        public string color = " white";
         public virtual void eat ()
           Console. Write line ("It Eating ... ");
      public class Dog: Animal
{
public overside void eat()
           Console . Write Line ("It Dog is Eating --- ");
         public void bank ()
         'Console . Writeline ("It Banking ...");
         public void show (olor ()
          Console. Write line (5" It Animal Base Color:
                { bose, color 5");
          (onsole, Writeline (5" \t Dog color: fcolor 9");
```

```
Static void Main (string [] angs)
         Dog dog = new Dog ();
          dog. bank();
          dog. show (olor 1);
          dog. eat ()
          Console · Read Key ();
Output:
         Barking...
Animal Bax Color: white
         Dog color: white
         Dog is Eating...
```

```
3.) Write a program to Handle Divide By 20,0 Exception
     and Index Out Of Range Exception.
     Source Lode:
       class ExceptionTest
         Static void Main (string [] ags)
             vax a = 11;
             vas b = 0;
             try
               vas c = a/b;
             catch ( Divide By Zero Exreption e)
              Console. Writeline (e. Message);
             List estring> languages = new list estring > (){
                "Python", "Java", "C#", "JavaScript", "C++", "PMP"
                  "R", "Scala", "Swift", " Kotlin" 9;
            for (int i=0; i < 11; i++)
                Console · Winkeline [languages [i]);
               catch ( Argument Out of Range Exception e)
                Console. Lead Write Line (e. Message);
```

Output

ray hard no, he is just all tall as you had as after

Attempted to divide by 2000.

Python

Java
C##

JavaScript
C++

PHP

R

Scala

Swift

Kotlin

Index was out of Range. Must be non-negative

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```
WAP to handle file in C#.
4.)
         a. Create and Write to a file
        b. Check whether file exists
         c. Read from a file
    Source Code:
      Class File Handle Test
         Static void Main (string [] args)
            File. Write AllText ("newfile.txt", " (realing and
             Writing to a file ");
             if (! File. Exists ("newfile.tx1"))
                 Console. Writeline ("File doesnot exist");
             elseet
               'Console. Write line ("File Exists");
            string txt = File. ReadAll Text ("new jik. txt");
             Console. Write line (txt);
             (onsole. Read Key ();
```

1) while to tenther the in the action of the control of the contro

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Output

File Exists treating and Writing to a file.

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```
5.) WAP in LIND Syntax
      a.) First create list of strings with 4 string values
      b.) Get and show all string from list with IINB
      c) Filter and show the list containing the matching
          string text.
    Source Lode
       class lingTest
        static void Main (string [] angs)
           List estring> fruits = new List estring> () {
                "apple", "mango", "banana", "grapes"
           vas fruit Query = fruit from fruit in fruits select fruit;
           Console. Writeline (" Get and show all item in quentlid");
           for each ( vas fruit in fruit Query)
           ' Console. Write (gruit + ", ");
           van match fruits = from fruit in fruits where fruit.

Contains ("ap") select fruit:
           Console. Writeline l'In Filtering and showing item which
                contains 'ap' ");
           foreach (vas fruit in match Fruits)
          ' console. Write ( fruit + ", ");
           Console. Read Key ();
```

and when the standard from the

Output

find the stand on hand and book - ground hard

the believe is the said bear I to smith it is

make a second of the second of

bet and show all item in query List apple, mango, banana, grapes,

Filtering and showing item which contain 'op' apple, grapes,

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Laurah lea 1801 is rather in

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Scanned with CamScanner

```
6.) Write an asynchronous program in C#.
      Somre lode:
        class AsyncTest
  public strutic async Task Main ()
              await Joreach (vas item in Message Asym ())
                System. Console. Write line (item);
               Console · Read Key ();
         Static async I Async Enumerable 2string > Message Async ()
               await Task. Delay (2000);
               yield return "Hello!";
                await Task. Delay (2000);
             y'ield return "Hello";
  Output
   Hello!
   Hello!
 CONCLUSION
 Hence, we are able to implement function overloading, inhesitance, exception handling, file handling, INO Syntax L asynchronous
```