1. What will be the output of the following code snippet:

using System;

public class Program

{

public static void Main(string[] args)

{

byte num = 100;

dynamic val = num;

Console.WriteLine(val.GetType());

val += 100;

Console.WriteLine(val.GetType());

}

}

**Answer:**

**1.System.Byte**

**2.Sytem.Int32**

2. What will be the output of the following code snippet:

using System;

public class Program

{

public static void Main(string[] args)

{

char[] num = { '1', '2', '3' };

Console.WriteLine(" char array: " + num);

}

}

**Answer:**

**char array: System.Char[]**

3. What will be the output of the following code snippet:

using System;

using System.Collections.Generic;

public class Program

{

public static void Main(string[] args)

{

var actions = new List();

for (int i = 0; i < 4; i++) actions.Add(() => Console.WriteLine(i));

foreach (var action in actions)

action();

}

}

**Answer:**

**Will throw the error on the "var action = new List()" Like Generic Type List<T> requires;**

4. What will be the output of the following code snippet:

using System;

public class Program

{

public static void Main()

{

classA a = new classC();

Console.WriteLine(a.Print());

}

public class classA

{

public virtual string Print()

{

return "classA";

}

}

public class classB : classA

{

public override string Print()

{

return "classB";

}

}

public class classC : classB

{

public new string Print()

{

return "ClassC";

}

}

}

**Answer: classB will return.**

5. What will be the output of the following code snippet:

using System;

public class Program

{

public static void Main(string[] args)

{

int n = 5;

int x = 4;

int z, c, k;

z = 3 \* x \* x + 2 \* x + 4 / x + 8; (3\*4\*4)+(2\*4)+(4/4)+8= 59 48+8+1+8 = 65

for (c = 1; c <= n; c++)

{

for (k = 1; k <= c; k++)

{

Console.Write(Convert.ToString(Convert.ToChar(z)));

z++;

}

Console.WriteLine("\n");

}

Console.ReadLine();

}

}

**Answer:**

**A**

**BC**

**DEF**

**GHIJ**

**KLMNO**

**Z value is 65, When convert to char, the ASCII value 65 is 'A', when you loop for 5 times it will be print like above.**

6. Write a method to check that a binary tree ↴ is a valid binary search tree?

7. Write an efficient method that checks whether any permutation ↴ of an input string is a palindrome.

8. Reverse a Linked List