EAD HOMEWORK_2

(BSSE & BSIT FALL 2018)

Instructions:

- Work on this Homework individually. Discussion is not allowed.
- Anyone caught being indulged in the act of plagiarism would be awarded **F** grade in this Subject.

Answers the following Questions:

Q1: Write down the advantages of unary and binary operators.

Q2: Suppose a,b,c,d,e,f,g are int type variables and initialized with 0 value. What will be the output of these variables if we apply the given operations. Please attach screenshot of the output and explain the output values procedure clearly.

```
b = 39;
a = ++b;
c = --b;
d = (c++)*(--a);
e = (d++)*(--c);
f = --b + 1;
f *= --e;
g = --d / 2;
```

If a becomes a- =50 which variables values will be affected? Please write down their changed values.

Q3: Logical operators like &,|,-,^ etc. are also known as bitwise operators. If you want to do AND operation between two numbers like 8(1000) and 5(0101) then its output will be 0.Write a program that takes first argument as the size of array and remaining arguments as numbers from command line arguments. Select two numbers randomly from the arguments numbers and apply bitwise operations using switch statement. Finally display the result in proper output formatting. You can use loop as well to operate your function multiple times.

Note: Do Type checking and Exceptional handling as well

Q4: Write a program that takes size of student subjects and their numbers in command line arguments. Apply Switch expression to display given statements with proper output formatting:

Number <50 → GPA : 0.0 FAIL

Number >50 && Number <57 → GPA : 1.0

Number >=57 && Number <64 → GPA : 1.7

Number >=64 && Number <=67 → GPA: 2.0

Number >=68 && Number <70 → GPA: 2.7

Number >=70 && Number <75 → GPA: 3.0

Number >=75 && Number <80 → GPA: 3.4

Number >=80 && Number <85 → GPA: 3.7

Number >=85 && Number <=100 → GPA: 4.0

Note: Do Type checking and Exceptional handling as well

Q5: Write a program that takes a floating-point number from user as input and then rounds off the number. Rounding the number should also be based on choice from user. Provide two methods of rounding, One with the banker's algorithm and the other one with the old method of rounding.

Q6: Differentiate between implicit and explicit type casting with examples. Why explicit type casting is not good?

Q7: Please find out the errors and explain the valid reasons in the snippet if it has.

```
namespace ConsoleApp2
{
    public class Model1
    {
        private protected int firstVariable;
        private int secondVariable;
    }
    public class Model2 : Model1
    {
        internal protected int thirdVariable;
        public int fourthVariable;
    }

    public class Model3 : Model2
    {
        protected int fifthVariable;
    }
    public class Model4 : Model3
    {
        public void Driver()
        {
            Model3 modelObj = new Model3();
            modelObj.fifthVariable = 50;
            fifthVariable = 23;
        }

        int sixthVariable;
    }
```

```
    class Program
    {
        static void Main(string[] args)
        {

            Model2 medel2_Obj = new Model2();
            Model4 model4_Obj = new Model4();
            Model4 model4_Obj2 = new Model3();

            model4_Obj.secondVariable;
            model4_Obj.fourthVariable;
            medel2_Obj.firstVariable;

        }
    }

}

namespace ConsoleApp1
{
    class Program : Model2
    {
        static void Main(string[] args)
        {
            Model1 obj = new Model1();
            Program obj_2 = new Program();
            obj_2.thirdVariable=1;
            obj.firstVariable=4;

        }
    }
}
```