```
using System;
namespace bahzad
{//Q1
    class math
    {
         int x , y;
        public math()
        {
            x = int.Parse(Console.ReadLine());
            y = int.Parse(Console.ReadLine());
        }
        public int sum()
        {
            return x+y;
        }
        public int multiplication()
        {
            return x*y;
        }
         public int power()
         {
             int p=1;
            for (int i = 1; i <=y; i++)
                    {
                         p*=x;
                    }
             return p;
         }
        public int factorial()
        {
            int f=1;
            for (int i = 2; i <= (x+y); i++)
                    {
                        f*=i;
                    }
               return f;
        }
    }
    class Program
    {
        static void Main(string[] args)
        {
            math c = new math();
            Console.WriteLine(c.sum());
            Console.WriteLine(c.multiplication());
            Console.WriteLine(c.power());
            Console.WriteLine(c.factorial());
        }
    }
}
```

```
using System;
namespace bahzad
    //Q2
{//class name student and filds contain name and mark  method GetRead to initialized all data
and GetWrite() to print info student
    //and getMark() to return mark student in main create 10 student and initialized all and
finaly print info best student by mark
    class student
    {
        double mark;
        string name;
        public void GetRead()
        {
            Console.Write("enter name : ");
            name = Console.ReadLine();
            Console.Write("enter mark : ");
            mark = double.Parse(Console.ReadLine());
        }
        public void GetWrite()
        {
            Console.WriteLine("name "+name+"  mark : "+mark);
        }
        public double GetMark()
        {
            return mark;
        }
    }//
    class Program
    {

        static void Main(string[] args)
        {
          student []s=new student[10];
          double best = 0; int index = 0;
          for (int i = 0; i < s.Length; i++)
          {
              s[i] = new student();//creating new object
              s[i].GetRead();
              if (s[i].GetMark()>best || i==0)
              {
                  best = s[i].GetMark();
                  index = i;
              }
          }//end loop
          Console.WriteLine("\n\nbest student is \n");
          s[index].GetWrite();

        }//end program
    }
}
```

```
using System;
namespace bahzad
{//Q4  arr[ahmad , salar , ali , abo jaso ] write indexer to
    //search name ahmad then must be print 0 otherwise return -1
    //search ali then return 2 etc...
    class A
    {
        string[] arr;
        public A(string []arr)
        {
            this.arr = arr;
        }
        public int this[string a]
        {
           get
           {
               bool flag=false;
               int index=0;
               for (int i = 0; i < arr.Length; i++)
               {

                   if (arr[i].Trim()==a)//trim()deletrkrna space " ali" dekata "ali"
                   {
                       flag = true;
                       index = i;
                       break;
                   }
               }
               if (flag)
               {
                   return index;
               }
               else
               {
                   return -1;
               }

           }//end get

        }//end indexer
    }

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

            A a = new A(new string []{"ahmad" ,"salar" ," ali", "abo jaso"});
            Console.WriteLine(a["ali"]);//2
            Console.WriteLine(a["abo ja3far"]);//-1

        }
    }
}
```