SOURCE CODE

```
import java.util.Scanner;
class student
{
  public static void main(String[] args)
    {
     int n, total = 0, percentage;
     Scanner s = new Scanner(System.in);
     System.out.print("Enter no. of subject:");
     n = s.nextInt();
     int marks[] = new int[n];
     System.out.println("Enter marks out of 100:");
     for(int i = 0; i < n; i++)
     {
        marks[i] = s.nextInt();
        total = total + marks[i];
       }
       percentage = total / n;
      System.out.println("Sum:"+total);
      System.out.println("Percentage:"+percentage);
     }
}
```

OUTPUT

SOURCE CODE

```
import java.util.*;
public class sortstring
{
public static void main(String args[])
{
String[] countries = {"Zimbabwe", "South-Africa", "India", "America", "Yugoslavia",
" Australia", "Denmark", "France", "Netherlands", "Italy", "Germany"};
int size = countries.length;
for(int i = 0; i<size-1; i++)
{
for (int j = i+1; j<countries.length; j++)
{
 if(countries[i].compareTo(countries[j])>0)
{
 String temp = countries[i];
countries[i] = countries[j];
countries[j] = temp;
}
}
}
System.out.println(Arrays.toString(countries));
}
}
```

OUTPUT

SOURCE CODE

```
import java.util.Arrays;
class sortcharacter
{
public static void main(String args[])
{
    int temp, string_size;
    String input_string = "javaprogram";
    System.out.println("The string is defined as: " +input_string);
    char charArray[] = input_string.toCharArray();
    string_size = charArray.length;
    for(int i = 0; i < string_size; i++ ) {
      for(int j = i+1; j < string_size; j++) {
        if(charArray[i]>charArray[j]) {
          temp = charArray[i];
          charArray[i] = charArray[j];
          charArray[j] = (char) temp;
        }
      }
    }
    System.out.println("\nThe characters of the string after sorting is:
"+Arrays.toString(charArray));
  }
}
```

OUTPUT

SOURCE CODE

```
 import java.util.*;
 class search
{
 public static void main(String args[])
 {
   int size,i,num,f=0;
   Scanner sc=new Scanner(System.in);
   System.out.println("Enter Size Of Array:");
   size=sc.nextInt();
   int a[]=new int[100];
   System.out.println("Enter The Array Elements:\n");
   for(i=0;i<size;i++)
     {
       a[i]=sc.nextInt();

      }
   System.out.println("Enter The Number You Want To Search:");
   num=sc.nextInt();
   for(i=0;i<size;i++)
     {
       if(num==a[i])
       {
             System.out.println("The Position Is:"+i);
                f=1;
              break;
       }
    }
     if(f==0)
       System.out.println("Not Found");
  }
}
```

OUTPUT

```
ubuntu@ubuntu:~$ javac search.java
ubuntu@ubuntu:~$ java search
Enter Size Of Array:
5
Enter The Array Elements:

5
10
50
30
60
Enter The Number You Want To Search:
10
The Position Is:1
ubuntu@ubuntu:~$
```

SOURCE CODE

```
import java.util.Scanner;
class stringman
{
public static void main(String[] args)
{
System.out.println("Enter The String");
Scanner sc = new Scanner(System.in);
StringBuffer sb=new StringBuffer("Hello");
sb.append("everyone");
String str1 = sc.nextLine();
System.out.println("Enter another string");
String s=sc.nextLine();
System.out.println("Length of String = "+str1.length());
System.out.println("Character at First position  = "+str1.charAt(0));
System.out.println("Concatenate :"+str1.concat(s));
System.out.println("LOWERCASE : "+str1.toLowerCase());
System.out.println("UPPERCASE : "+str1.toUpperCase());
System.out.println("append : "+sb);
System.out.println("replace: "+str1.replace("h","@"));
System.out.println("indexof: "+str1.indexOf("e"));
sb.insert(5,"java");
System.out.println(sb);
char[] ch = str1.toCharArray();
System.out.println("Char Array elements: ");
for (int i = 0; i <ch.length; i++)
{
  System.out.println(ch[i]);
}

}
}
```

OUTPUT

```
ubuntu@ubuntu:~$ javac stringman.java
ubuntu@ubuntu:~$ java stringman
Enter The String
Hello
Enter another string
world
Length of String = 5
Character at First position  = H
Concatenate :Helloworld
LOWERCASE : hello
UPPERCASE : HELLO
append : Helloeveryone
replace: Hello
indexof: 1
Hellojavaeveryone
Char Array elements:
H
e
l
l
o
ubuntu@ubuntu:~$
```

SOURCECODE

```
import java.util.Scanner;
public class employ
  {
   int eNumber;
   String eName;
   double eSalary;
   public void getdetails()
   {
      System.out.println("\nEnter the Employee details");
      Scanner sc = new Scanner(System.in);
      System.out.println("Employee number : ");
      eNumber=sc.nextInt();
      System.out.println("Name : ");
      sc.nextLine();
      eName=sc.nextLine();
      System.out.println("Salary : ");
      eSalary=sc.nextDouble();
   }
   void display()
   {
      System.out.println("Empolyee No :"+eNumber);
      System.out.println("Name :"+eName);
      System.out.println("Salary Amount"+eSalary+"\n");
   }
   public static void main(String[] args)
   {
      System.out.println("\nEnter the No. of Employee's");
      Scanner sc1 = new Scanner(System.in);
      int num = sc1.nextInt();
      employ arr[]=new employ[num];
      for(int i =0;i<num;i++){
            arr[i]=new employ();
            arr[i].getdetails();

      }
      System.out.println("\nInformations of all the employee's");
      for(int i=0;i<num;i++){
         arr[i].display();
    }
    boolean state = false;
```

```
    System.out.println("\nEnter the Employee Number to get details of a employee");
    int num2= sc1.nextInt();
    for(int i=0;i<num;i++){
        if(arr[i].eNumber==num2){
       System.out.println("\nEmployee details");
        arr[i].display();
        }
       }
   }
}
```

OUTPUT

```
ubuntu@ubuntu:~$ javac employ.java
ubuntu@ubuntu:~$ java employ

Enter the No. of Employee's
2

Enter the Employee details
Employee number :
105
Name :
Anu
Salary :
20000

Enter the Employee details
Employee number :
130
Name :
Akash
Salary :
15000

Informations of all the employee's
Empolyee No :105
Name :Anu
Salary Amount20000.0

Empolyee No :130
Name :Akash
Salary Amount15000.0


Enter the Employee Number to get details of a employee
105
```

```
Name :
Anu
Salary :
20000

Enter the Employee details
Employee number :
130
Name :
Akash
Salary :
15000

Informations of all the employee's
Empolyee No :105
Name :Anu
Salary Amount20000.0

Empolyee No :130
Name :Akash
Salary Amount15000.0


Enter the Employee Number to get details of a employee
105

Employee details
Empolyee No :105
Name :Anu
Salary Amount20000.0

ubuntu@ubuntu:~$
```

SOURCE CODE

```
import java.util.Scanner;
 class Leapyear
 {
   public static void main(String[] args)
   {
       int startYear, endYear, i;
       Scanner in = new Scanner(System.in);
       System.out.print("Enter the Start Year:");
       startYear = in.nextInt();
       System.out.print("Enter the End Year:");
       endYear = in.nextInt();
       System.out.println("Leap years:");
      for (i = startYear; i <= endYear; i++)
     {
   if ( ( i % 4==0) && ( i % 100!=0) || ( i % 400==0) )
       {
            System.out.println(i);
}
  }
}
 }
```

OUTPUT

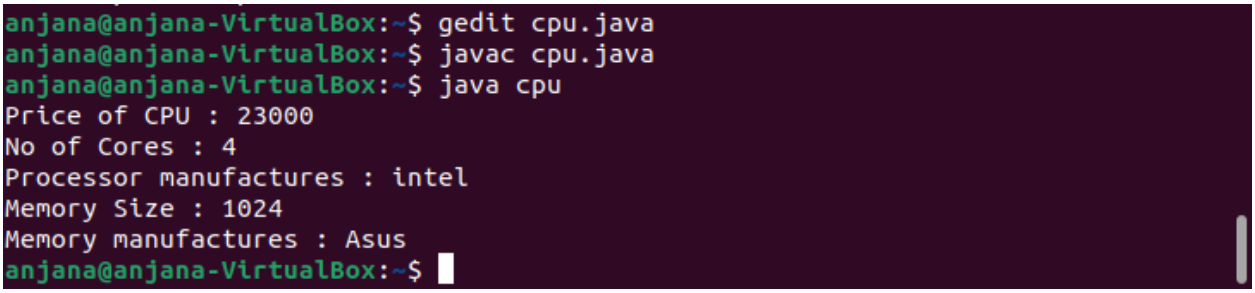
```
anjana@anjana-VirtualBox:~$ gedit leapyear.java
anjana@anjana-VirtualBox:~$ javac leapyear.java
anjana@anjana-VirtualBox:~$ java leapyear
Enter the Start Year:2000
Enter the End Year:2010
Leap years:
2000
2004
2008
anjana@anjana-VirtualBox:~$
```

SOURCE CODE

```
import java.util.*;
class cpu
{
   int price;
   cpu(int p)
   {
      this.price = p;
   }
  class Processor
   {
      int cores;
      String manufacture;
      Processor(int n, String m)
      {
         this.cores = n;
         this.manufacture = m;
      }

      void display()
      {
         System.out.println("No of Cores : " + this.cores);
         System.out.println("Processor manufactures : " + this.manufacture);
      }
   }
```

```
    static class Ram
    {
        int memory;
        String manufacture;
        Ram(int n, String m)
        {
            this.memory = n;
            this.manufacture = m;
        }




     void display()
        {

            System.out.println("Memory Size : " + this.memory);
            System.out.println("Memory manufactures : " + this.manufacture);
        }
    }
  void display()
  {
       System.out.println("Price of CPU : " + this.price);
    }

    public static void main(String[] args)
    {
        cpu intel = new cpu(23000);
        cpu.Processor i_processor = intel.new Processor(4, "intel");
        cpu.Ram i_ram = new Ram(1024, "Asus");
        intel.display();
        i_processor.display();
        i_ram.display();
    }
}
```

OUTPUT


anjana@anjana-VirtualBox:~$ gedit cpu.java
anjana@anjana-VirtualBox:~$ javac cpu.java
anjana@anjana-VirtualBox:~$ java cpu
Price of CPU : 23000
No of Cores : 4
Processor manufactures : intel
Memory Size : 1024
Memory manufactures : Asus
anjana@anjana-VirtualBox:~$