practical 1

```
import java.util.*;
class IPE1
{
	public static void main(String[]arg)
	{
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter percentage of students:");
		int n = sc.nextInt();

		if(n>70)
		{
			System.out.println("Grade A");
		}

		else if(n>60&&n<=70)
		{
			System.out.println("Grade B");
		}

		else if (n>50&&n<=60)
		{
			System.out.println("Grade C");
		}

		else
		{
			System.out.println("Grade F");
		}
	}
}
```

practical 2

```
class IPE2
{
	public static void main(String[]arg)
	{
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter first number: ");
		int a = sc.nextInt();
		System.out.print("Enter second number: ");
		int b = sc.nextInt();
		System.out.print("Enter third number: ");
		int c = sc.nextInt();

		if(a>b&&a>c)
		{
			System.out.println("A is Maximum number");
		}

		else if (b>a&&b>c)
		{
			System.out.println("B is Maximum number");
		}

		else
		{
```

```
                System.out.println("C is Maximum number");
            }
      }
}

practical 3
class IPE3
{
      public static void main(String[]arg)
      {
            Scanner sc = new Scanner(System.in);
            System.out.print("Enter any Character:");
            char c = sc.next().charAt(0);
          int t;


      if((c=='a')||(c=='A')||(c=='e')||(c=='E')||(c=='i')||(c=='I')||(c==
'o')||
            (c=='O')||(c=='u')||(c=='U'))
            {
                  t=1;
            }

            else
            {
                  t=2;
            }

           switch(t)
            {
                  case 1:
                  {
                      System.out.print("Character is vowel");
                        break;
                  }

                  case 2:
                  {
                      System.out.println("Character is consonant");
                        break;
                  }

            }
      }
}

practical 4
class IPE4
{
      public static void main(String[]arg)
      {
            Scanner sc = new Scanner(System.in);
            System.out.print("Enter Strating range:");
            int m = sc.nextInt();
            System.out.print("Enter ending rang:");
            int n = sc.nextInt();
            System.out.print("Enter number:");
            int a = sc.nextInt();
```

```
            for (int i=m;i<=n;i++)
            {
                  if(i%a==0)
                  {
                      System.out.print(i+" ,");
                  }
            }
      }
}

practical 5
class IPE5
{
      public static void main(String[]arg)
      {
            Scanner sc = new Scanner(System.in);
            int i;
            int ecount=0;
            int ocount=0;
            int a[]=new int[10];
            System.out.println("Enter 10 number:");

            for(i=0;i<10;i++)
            {
                System.out.println("Enter the number"+i+":");
            a[i]=sc.nextInt();

            if(a[i]%2==0)
            {
                ecount++;
            }
            else
            {
                  ocount++;
            }
            }

            System.out.println("Total even no:"+ecount);
            System.out.println("Total odd no:"+ocount);
      }
}

practical 6
class IPE6
{
      public static void main(String[]arg)
      {
            Scanner sc = new Scanner(System.in);
            System.out.print("Enter number:");
            int n=sc.nextInt();
            int i;

            for(i=2;i<n;i++)
            {
                  if(n%i==0)
                  {
                        break;
```

```
                }
            }
            if(n==i)
            {
                System.out.println("number is prime");
            }
            else
            {
                System.out.println("number is not prime");
            }
      }
}

practical 7
class IPE7
{
      public static void main(String[]arg)
      {
            Scanner sc = new Scanner(System.in);
            System.out.print("Enter number");
            int n=sc.nextInt();
            int m;
            m=n;
            int digit=0;
            int sum=0;
            while(n!=0)
            {
                digit = n%10;
                sum = (sum)+(digit*digit*digit);
                n=n/10;
            }
            if(sum==m)
            {
            System.out.println("number is amstrong");
            }
            else
            {
                System.out.println("number is not amstrong");
            }
      }
}

practical8
class IPE8
{
      public static void main(String[]arg)
      {
            Scanner sc=new Scanner(System.in);
            System.out.print("enter number:");
            int n=sc.nextInt();
            int a=0;int b=1;int c;
            for(int i=1;i<=n;i++)
            {
                c=a+b;
                System.out.println(a+",");
               a=b;
                b=c;
            }
```

```
	}
}

practical 9
class IPE9
{
	public static void main(String[]arg)
	{
		Scanner sc = new Scanner(System.in);
		System.out.println("enter number");
		int n=sc.nextInt();
		int fd=0;
		int ld=n%10;
		while(n!=0)
		{
			fd=n%10;
			n=n/10;
		}
		System.out.println(ld+fd);
	}
}

practical 10
class IPE10
{
	public static void main(String[]arg)
	{
		Scanner sc = new Scanner(System.in);
		System.out.println("enter number of rows:");
		int n=sc.nextInt();
		for(int i=1;i<=n;i++)
		{
			int k=1;
			for(int j=1;j<=i;j++)
			{
				System.out.print(k);
			k=k+2;
			}
			System.out.println();
		}
	}
}

practical 11
class IPE11
{
	public static void main(String[]arg)
	{
		Scanner sc = new Scanner(System.in);
		System.out.println("enter number of rows:");
		int n=sc.nextInt();

		for(int i=1;i<=n;i++)
		{
			for(int j=1;j<=i;j++)
			{
				if(i%2==0)
				{
```

```
                        System.out.print("#");
                }
            else
                    {
                        System.out.print("*");
                    }
                }
                System.out.println();
            }
      }

}

practical 12
class IPE12
{
      public static void main(String[]arg)
      {
            Scanner sc = new Scanner(System.in);
            System.out.println("enter number of rows:");
            int n=sc.nextInt();

            for(int i=1;i<=n;i++)
            {
                for(int j=1;j<=i;j++)
                {
                    if((i+j)%2==0)
                    {
                        System.out.print("1");
                }
                else
                    {
                        System.out.print("0");
                    }
                }
                System.out.println();
            }
      }

}

practical 13
class IPE13
{
      public static void main(String[]arg)
      {
            Scanner sc = new Scanner(System.in);
            System.out.println("enter number of rows:");
            int n=sc.nextInt();
            int k=1;

            for(int i=1;i<=n;i++)
            {
                for(int j=1;j<=i;j++)
                {
                 System.out.print(k+" ");
                 k=k+1;
                }
```

```
                System.out.println();
            }
      }
}

practical 14
class IPE14
{
      public static void main(String[]arg)
      {
            Scanner sc = new Scanner(System.in);
            System.out.println("enter number of rows:");
            int n=sc.nextInt();

            for(int i=1;i<=n;i++)
            {
                  for(int j=1;j<=i;j++)
                  {
                   System.out.print(i+" ");
                  }
                  System.out.println();
            }
      }
}

practical 15
class IPE15
{
      public static void main(String[]arg)
      {
            Scanner sc = new Scanner(System.in);
            System.out.print("enter new string:");
            String s =sc.nextLine();

            String rev ="";
            for(int i=s.length()-1;i>=0;i--)
            {
                  rev = rev+s.charAt(i);
            }
            if(rev.equals(s))
            {
                  System.out.println("String is palindrome");
            }
            else
            {
                  System.out.println("String is not palindrome");
            }
      }
}

practical 16
class IPE16
{
      public static void main(String[]arg)
      {
            Scanner sc = new Scanner(System.in);
            System.out.println("enter string:");
            String s=sc.nextLine().toLowerCase();
```

```
            int count = 0;
            for(int i=0;i<s.length();i++)
            {

      if(s.charAt(i)=='a'||s.charAt(i)=='e'||s.charAt(i)=='i'||s.charAt(i
)=='o'||s.charAt(i)=='u')
                  {
                        count++;
                  }
            }
            System.out.println(count);
      }
}

practical 17
class IPE17
{
      public static void main(String[]arg)
      {
            int a,b,temp;
            Scanner sc = new Scanner(System.in);
            System.out.print("enter first number A:");
           a=sc.nextInt();
            System.out.print("enter second number B:");
           b=sc.nextInt();
           System.out.println("before swping:A:"+a+"B:"+b);

            temp=a;
            a=b;
            b=temp;
            System.out.println("after swping:A:"+a+"B:"+b);
      }
}

practical 18
class IPE18
{
      public static void main(String[]arg)
      {
            Scanner sc = new Scanner(System.in);
            System.out.println("enter a year:");
            int y = sc.nextInt();

            if(y%4==0)
            {
                  System.out.print("the year is leap year");
            }

            else
            {
                  System.out.print("the year is not leap year");
            }
      }
}

practical 19
class IPE19
```

```
{
	public static void main(String[]arg)
	{
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter Nth part:");
		double n=sc.nextDouble();
		double sum = 1.0;
		double x=3;
		for(double i=1.0;i<n;i++)
		{
			sum = sum+(x/x+2);
			x=x+2;
		}
		System.out.println("sum of series number ="+sum);
	}
}

//practical 20
class IPE20
{
	public static void main(String[]arg)
	{
		Scanner sc = new Scanner(System.in);
		System.out.println("Enter no");
		int n=sc.nextInt();
		int a[]=new int[n];
		int b[]=new int [n];
		int c[]=new int[n];
		System.out.print("enter value of a:");
		 for(int i=0;i<n;i++)
		 {
			a[i]=sc.nextInt();
		 }
		 System.out.print("Enter value of b:");
		 for(int i=0;i<n;i++)
		 {
			b[i]=sc.nextInt();
		 }
		 System.out.print("Sum of a and b: ");
		 for(int i=0;i<n;i++)
		 {
			c[i]=a[i]+b[i];
		 }
		 for(int i=0;i<n;i++)
		 {
			System.out.print(c[i]+",");

		 }
	}
}
```