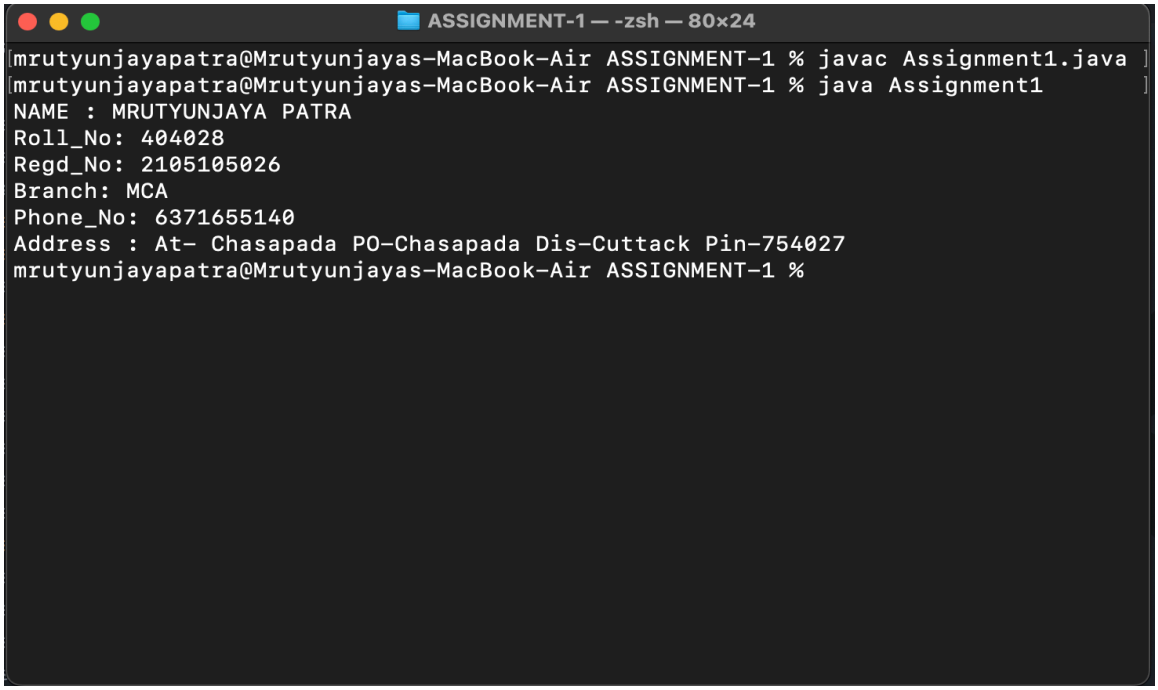
ASSIGNMENT-1

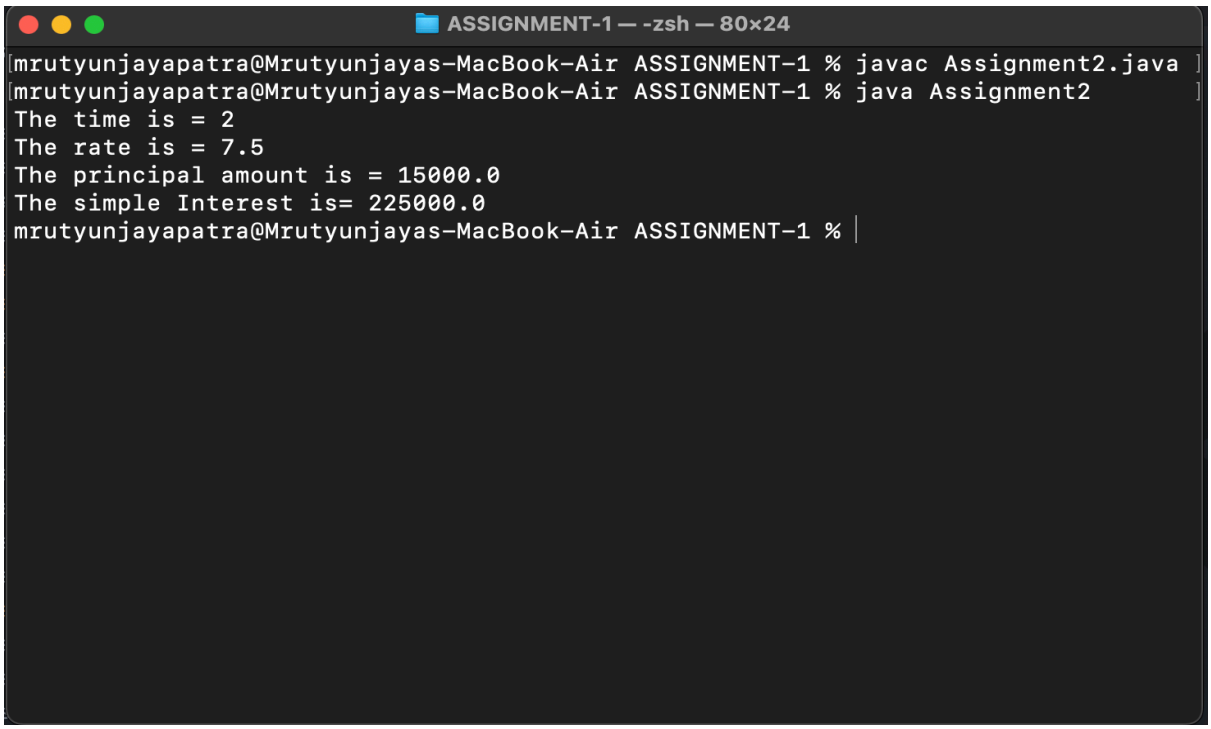
1.Write a java program to print your biodata?

```
public class Assignment1{
    public static void main(String[] args) {
        System.out.println("NAME : MRUTYUNJAYA PATRA");
        System.out.println("Roll_No"+": 404028");
        System.out.println("Regd_No"+": 2105105026");
        System.out.println("Branch"+": MCA");
        System.out.println("Phone_No"+": 6371655140");
        System.out.println("Address"+"   :   At-   Chasapada   PO-
Chasapada Dis-Cuttack Pin-754027");

    }
}
```



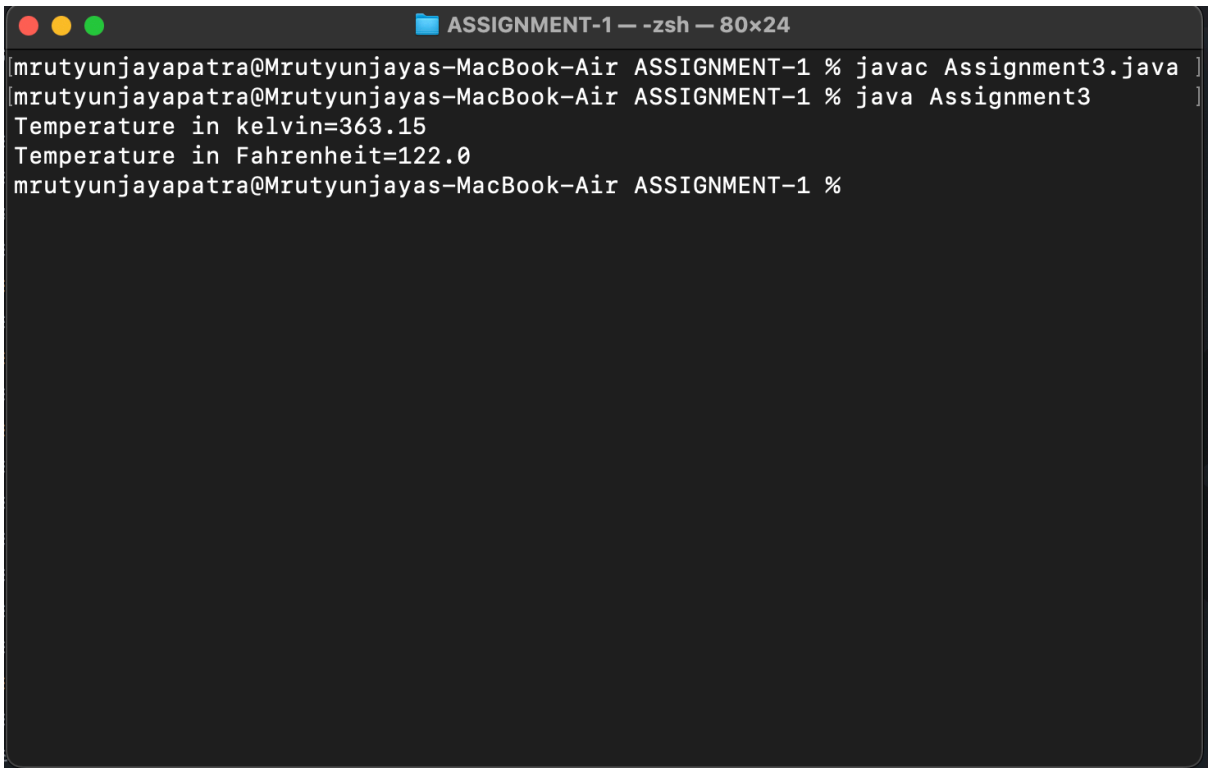
2. Write a java program to find simple interest?

```java
import java.util.Scanner;

public class Assignment2 {
    public static void main(String[] args) {
        double amount=15000.00;
        int time =2;
        float rate=7.5f;
        double SI=0;
        System.out.println("The time is = "+time);
        System.out.println("The rate is = "+rate);
        System.out.println("The principal amount is = "+amount);
        SI=amount*rate*time;
        System.out.println("The simple Interest is= "+ SI);


    }
}
```



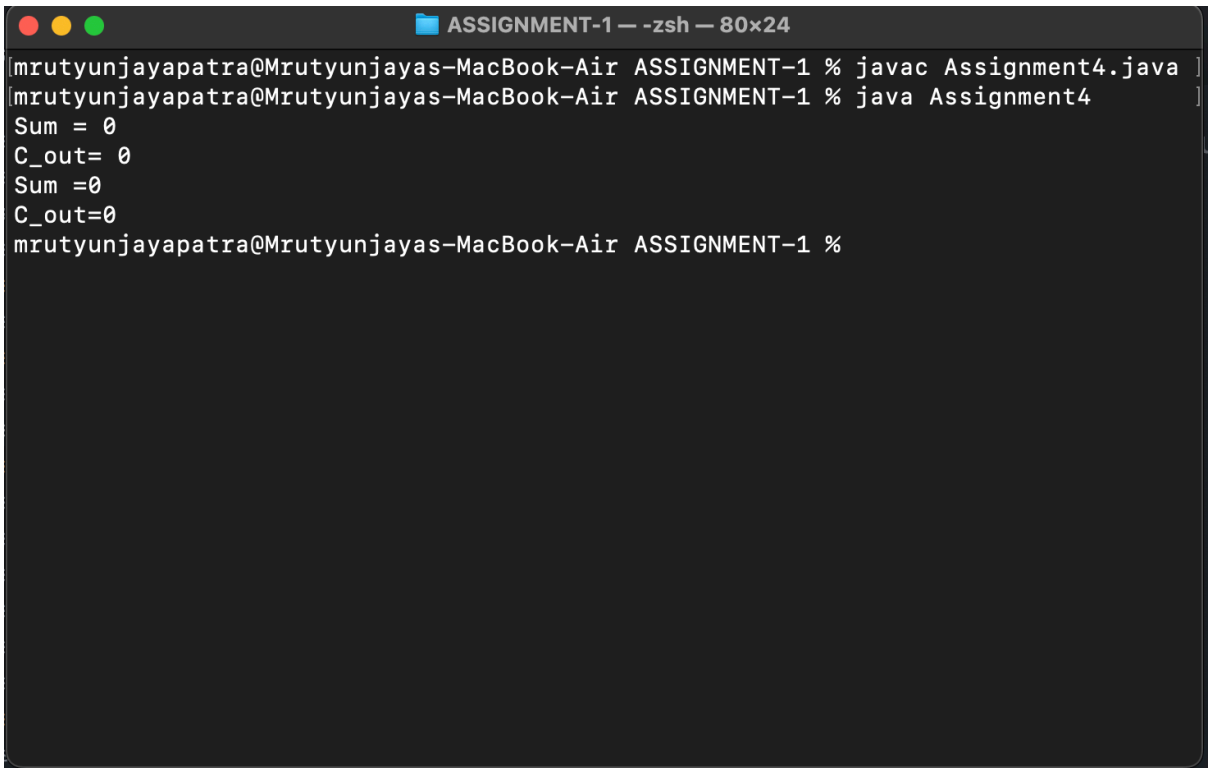
3. Write a java program for temperature conversion?

```java
public class Assignment3 {

    public static void main(String[] args) {
        float celsius = 90;
        double temp_in_kelvin = 0;
        double temp_in_fahrenheit = 0;
        temp_in_kelvin = celsius + 273.15;
        temp_in_fahrenheit = celsius * (9 / 5) + 32;

        System.out.println("Temperature in kelvin=" +
temp_in_kelvin);
        System.out.println("Temperature in Fahrenheit=" +
temp_in_fahrenheit);

    }

}
```



4. Write a java program to implement adder circuit and booth algorithm using bitwise operator?

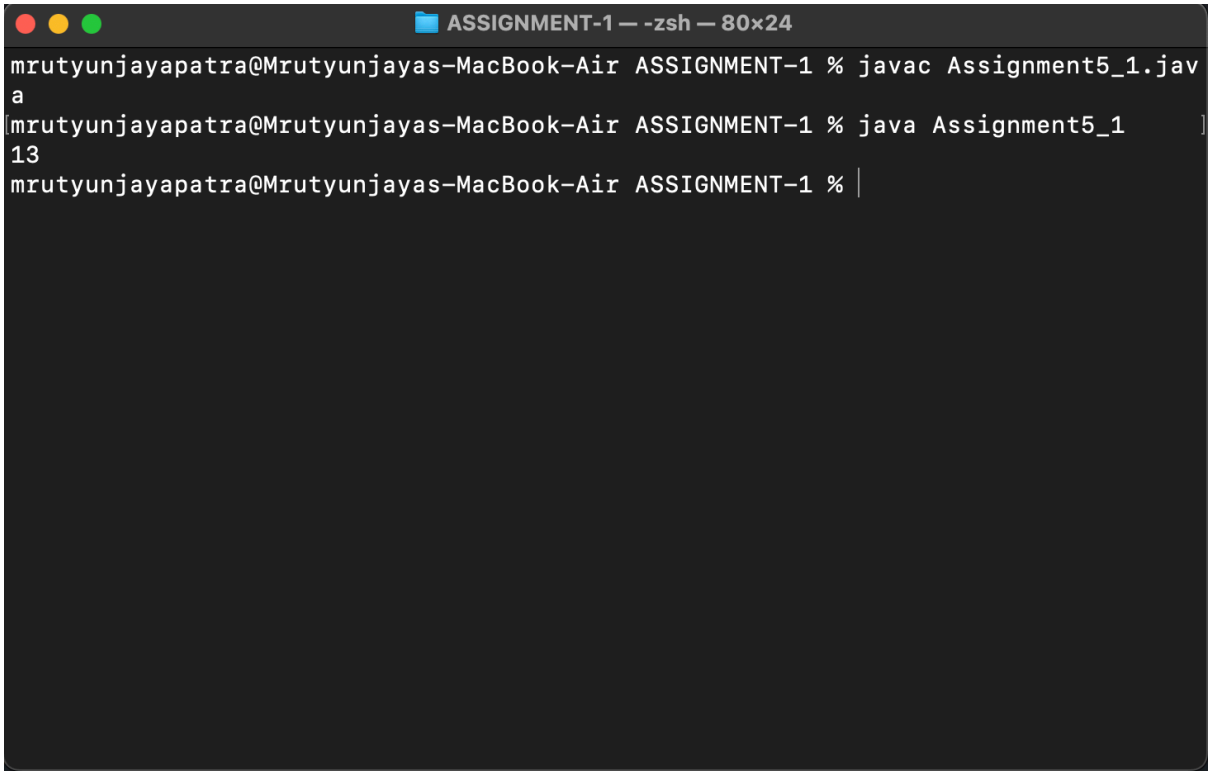
```java
public class Assignment4 {
    public static void main(String[] args) {
        int num1=0, num2=0 ,  C_In=0, C_Out;
        int sum;
         //for half adder circuit
         sum = num1 ^ num2;
         C_Out = num1 & num2;
         System.out.println("Sum = "+ sum);
         System.out.println("C_out= "+C_Out);
        //for full adder
        sum=C_In ^ (num1 ^ num2);
        C_Out = (num1 & num2) | (num2 &C_In) | (num1&C_In);
        System.out.println("Sum ="+ sum);
        System.out.println("C_out="+C_Out);
    }
}
```



5. Write a java program to find following without using looping and decision making

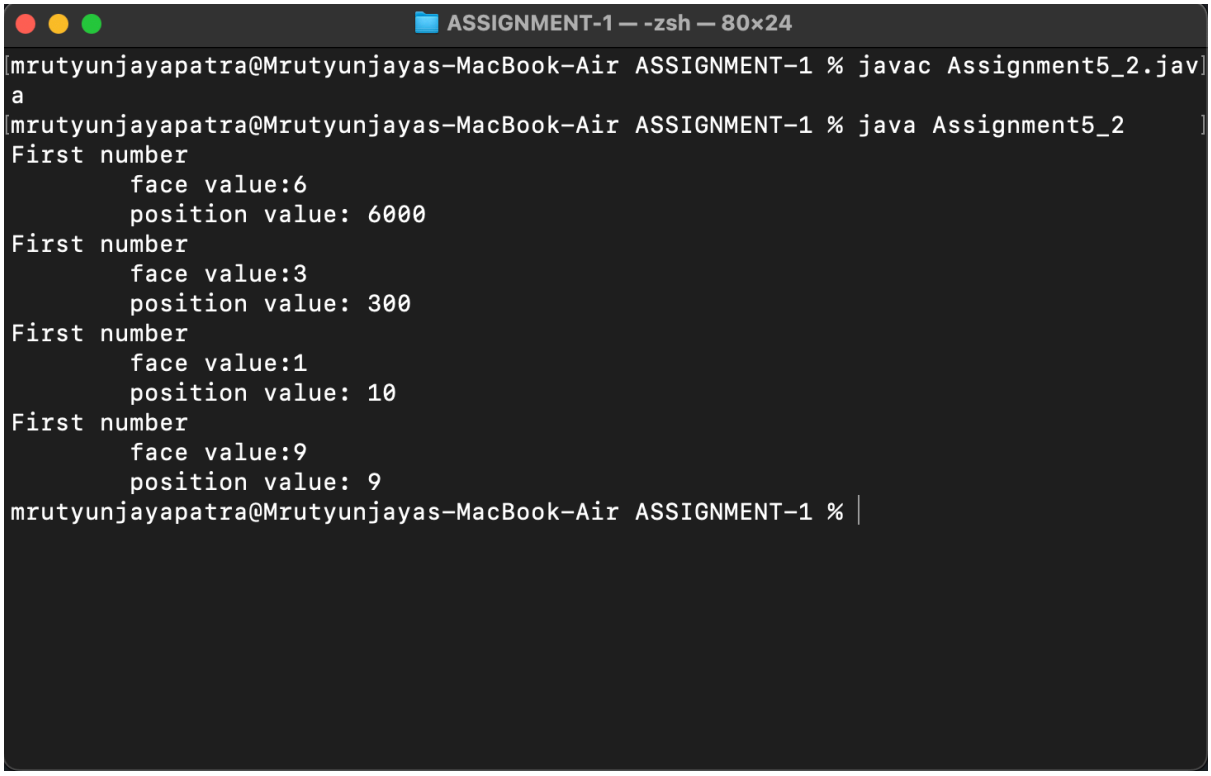
i. Sum of all digits of any 4 digit numbers

```java
public class Assignment5_1 {
    public static void main(String[] args) {
        int num = 1624;
        int sum = 0, rem;
        rem = num % 10;
        sum += rem;
        rem = 0;
        num = num / 10;
        rem = num % 10;
        sum += rem;
        rem = 0;
        num = num / 10;
        rem = num % 10;
        sum += rem;
        rem = 0;
        num = num / 10;

        rem = num % 10;
        sum += rem;
        rem = 0;
        num = num / 10;
        System.out.println(sum);

    }
}
```



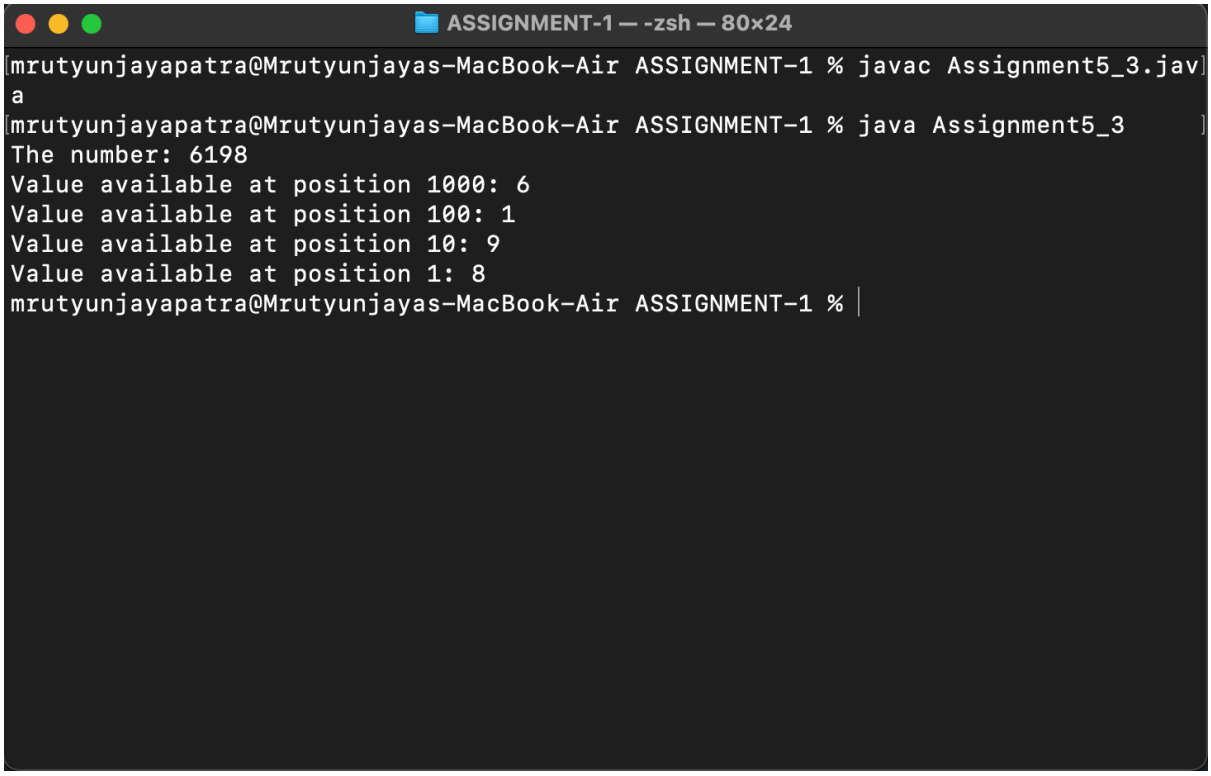
ii. find the face value and position value of any 4 digit number?

```
public class Assignment5_2 {
    public static void main(String[] args) {
        int num;
        num = 6319;
        System.out.println("First                number\n\tface
value:"+(num/1000)+" \n\tposition value: "+(num - num % 1000));
        System.out.println("First                number\n\tface
value:"+(num/100%10)+"  \n\tposition  value:  "+(num/100%10  *
100));
        System.out.println("First                number\n\tface
value:"+(num/10%10)+" \n\tposition value: "+(num/10%10 * 10));
        System.out.println("First                number\n\tface
value:"+(num%10)+" \n\tposition value: "+(num%10));
    }
}
```



iii. Find the value available at position required by user it may be 10,100 or 1000?

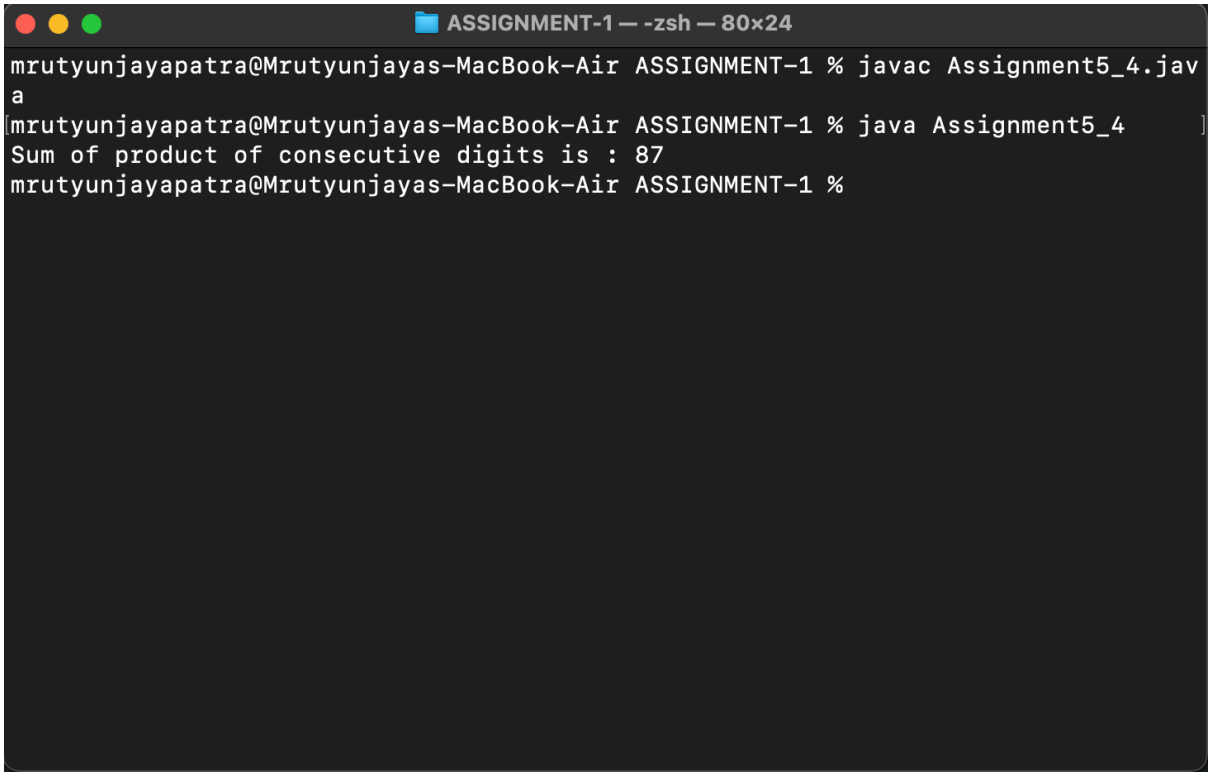
```java
public class Assignment5_3 {
    public static void main(String[] args) {
        int num=6198;

        System.out.println("The number: "+num);
        System.out.println("Value available at position 1000:
"+(num/1000));
        System.out.println("Value available at position 100:
"+(num/100%10));
        System.out.println("Value available at position 10:
"+(num/10%10));
        System.out.println("Value available at position 1:
"+(num%10));
    }
}
```



iv. Sum of product of consecutive digits of any 4 digit number? Supoose num=1234 then output= 4*3+3*2+2*1

```java
public class Assignment5_4 {
    public static void main(String[] args) {
        int num=6198;
        int a,b,c,d,ans=0;

        a=num%10;
        num/=10;

        b=num%10;
        num/=10;

        c=num%10;
        num/=10;

        d=num%10;
        num/=10;
```

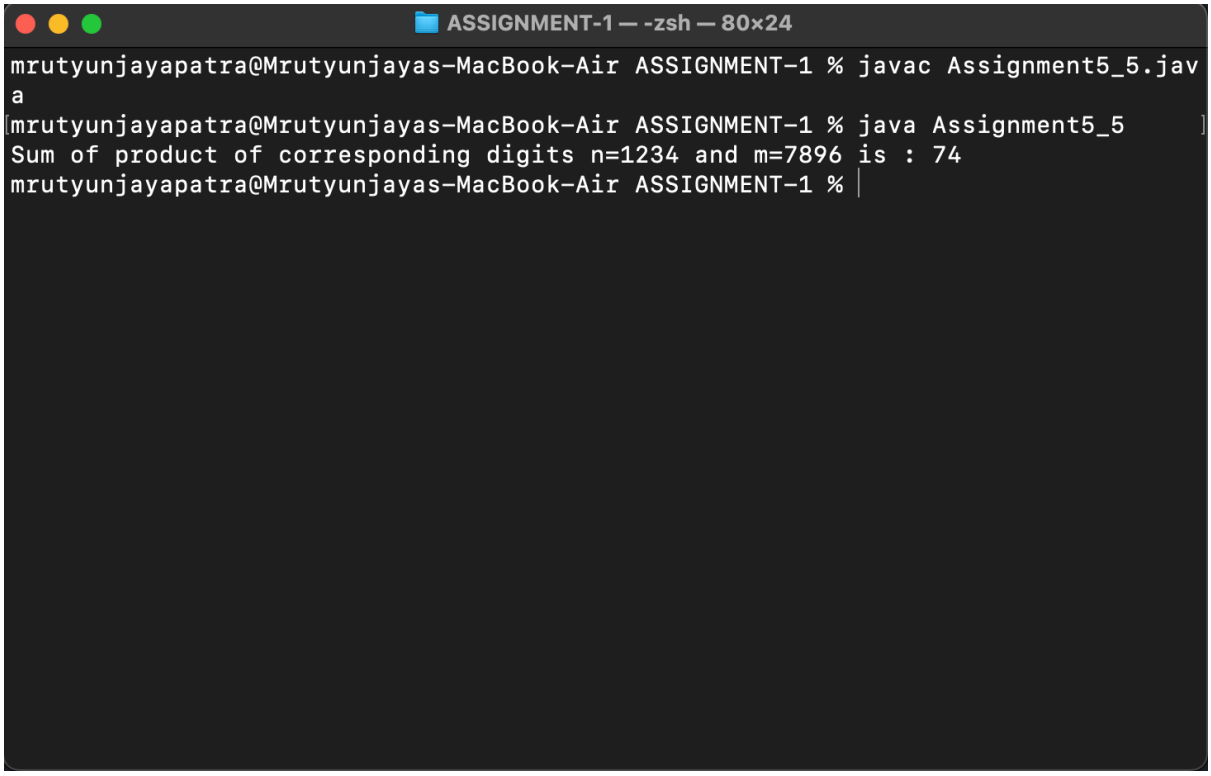
```
        ans=(a*b)+(b*c)+(c*d);
        System.out.println("Sum of product of consecutive
digits is : "+ans);


    }
}
```



v. find sum of product of corresponding digits of two any 4 digit number Such as n=1234 m=7896 output=6*4+9*3+8*2+7*1

```
public class Assignment5_5 {
    public static void main(String[] args) {

        int n = 1234, m = 7896, sum = 0;
        int a1, b1, c1, d1;
```

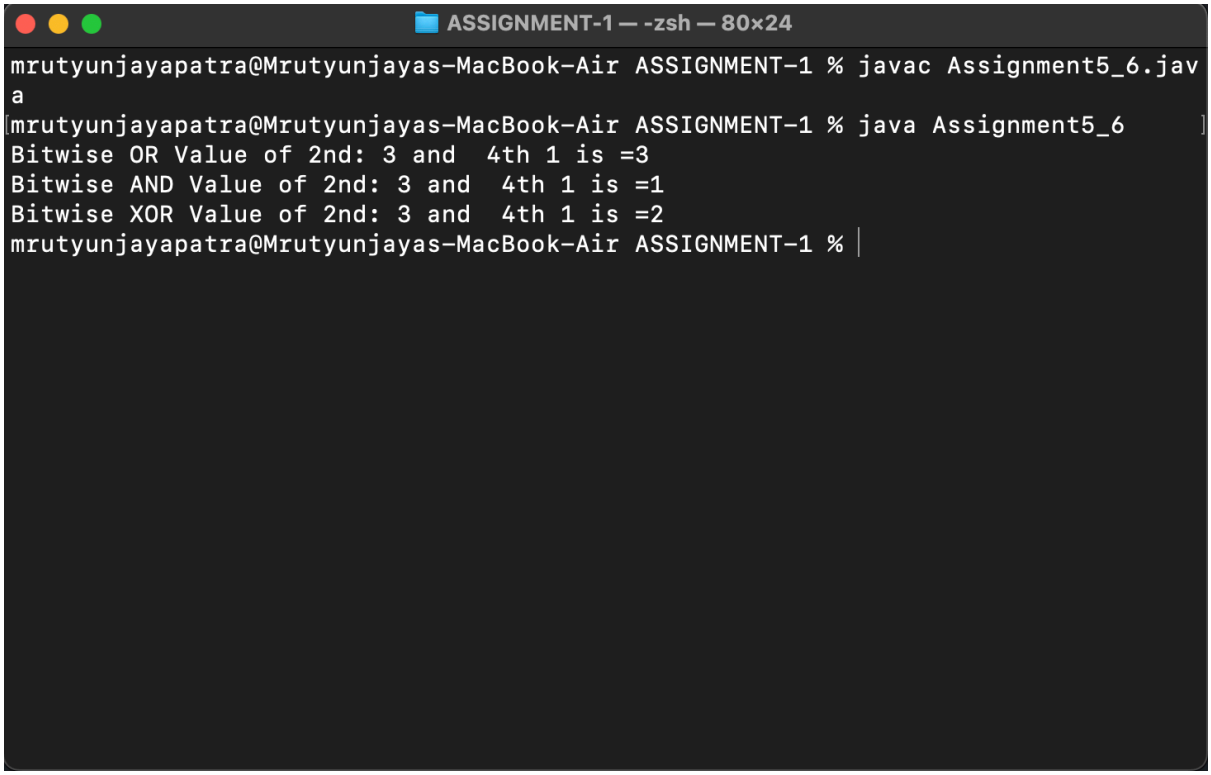
```
        int a2, b2, c2, d2;

        a1 = n % 10;
        n /= 10;

        b1 = n % 10;
        n /= 10;

        c1 = n % 10;
        n /= 10;

        d1 = n % 10;
        n /= 10;

        a2 = m % 10;
        m /= 10;
        b2 = m % 10;
        m /= 10;
        c2 = m % 10;
        m /= 10;
        d2 = m % 10;
        m /= 10;

        sum = a1 * a2 + b1 * b2 + c1 * c2 + d1 * d2;

        System.out.println("Sum of product of corresponding
digits n=1234 and m=7896 is : "+sum);

    }
}
```



vi. find bitwise and , or , and xor of 2nd and 4th digit of any 4 digit number?

```java
public class Assignment5_6 {
    public static void main(String[] args) {

        int num=1234;
        int m, n, temp;

        m=((num/10) %10);
        n=((num/1000) %10);
        temp=m|n;
        System.out.println("Bitwise OR Value of 2nd: "+m+" and
"+" 4th "+n+" is ="+temp);
        temp=m&n;
        System.out.println("Bitwise AND Value of 2nd: "+m+"
and "+" 4th "+n+" is ="+temp);
        temp=m^n;
```

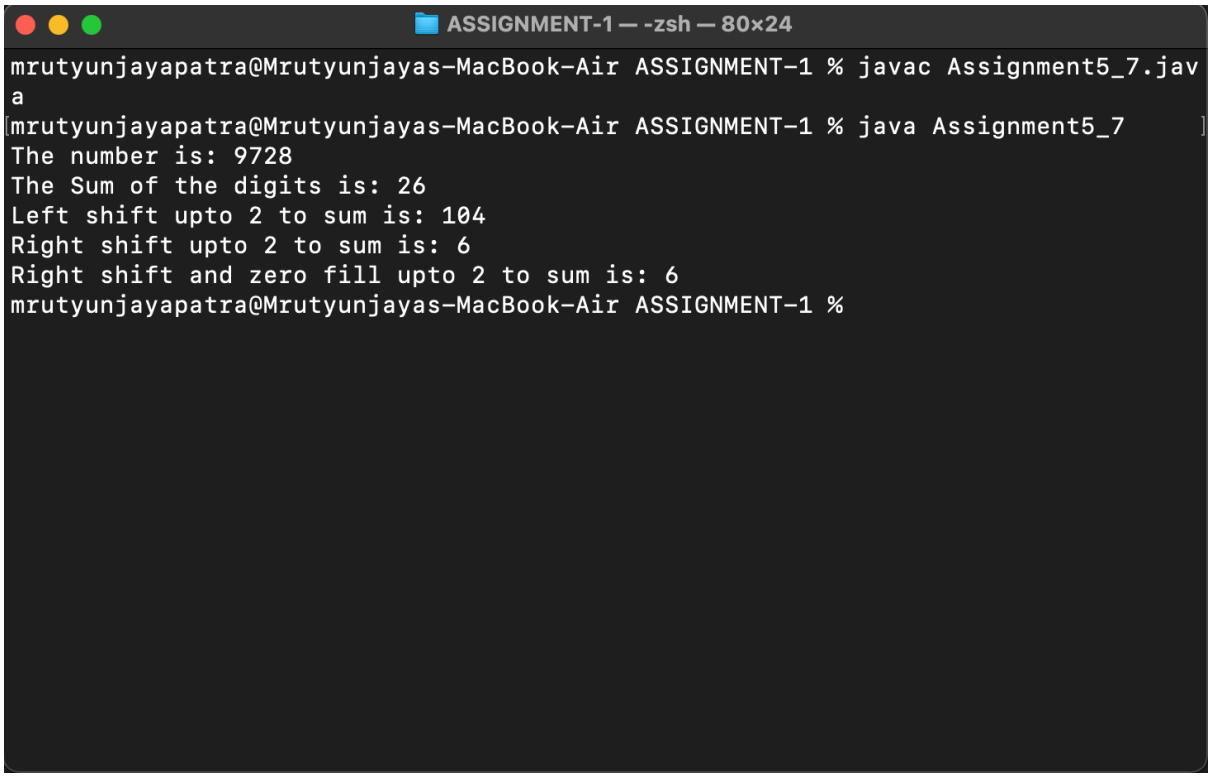
```
        System.out.println("Bitwise XOR Value of 2nd: "+m+"
and "+" 4th "+n+" is ="+temp);


    }
}
```



vii. Find left shit, right shift and zero fill of summation of all digits of any 4 digit number and it will be shifted by 3rd digit of any 4 digit number?

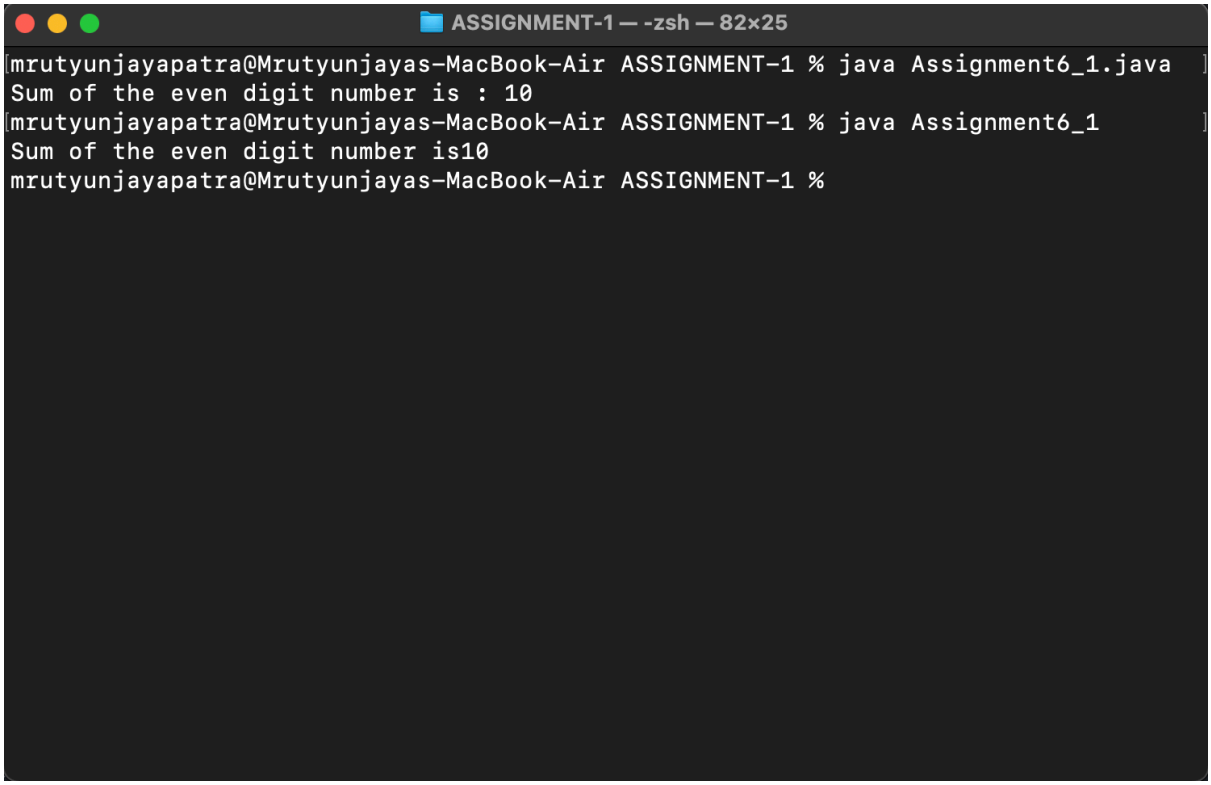
```
public class Assignment5_7 {
    public static void main(String[] args) {

        int num, sum, d1, d2, d3, d4;
        num = 9728;

        d1 = num / 1000;
```

```
        d2 = num / 100 % 10;
        d3 = num / 10 % 10;
        d4 = num % 10;

        sum = d1 + d2 + d3 + d4;

        System.out.println("The number is: " + num);
        System.out.println("The Sum of the digits is: " +
sum);
        System.out.println("Left shift upto " + d3 + " to sum
is: " + (sum << d3));
        System.out.println("Right shift upto " + d3 + " to sum
is: " + (sum >> d3));
        System.out.println("Right shift and zero fill upto " +
d3 + " to sum is: " + (sum >>> d3));



    }
}
```



6. Write a java program to find following using conditional operator and without using looping and decision making ?
a. Sum of all even digits of any 4 digit number

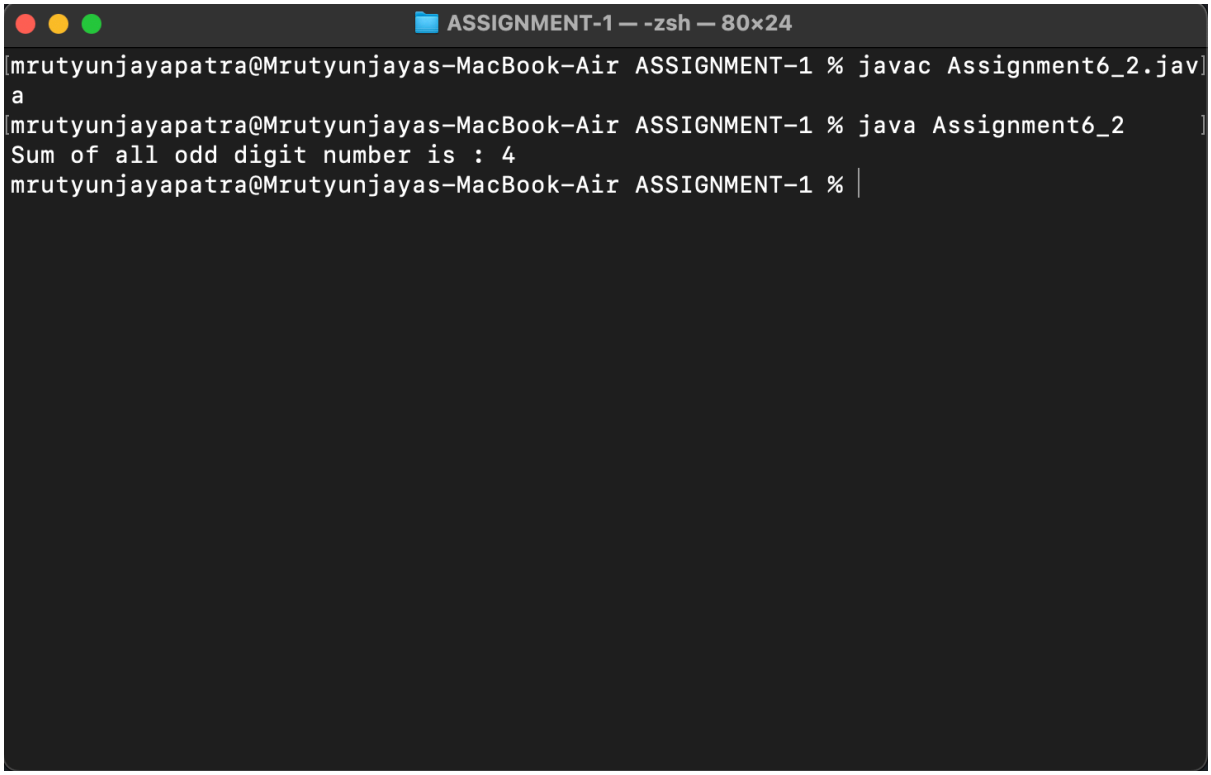
```
public class Assignment6_1 {
    public static void main(String[] args) {
        int num = 2242, rem = 0, sum = 0;

        rem = num % 10;
        sum += rem % 2 == 0 ? rem : 0;
        num = num / 10;
        rem = 0;

        rem = num % 10;
        sum += rem % 2 == 0 ? rem : 0;
        num = num / 10;
        rem = 0;

        rem = num % 10;
        sum += rem % 2 == 0 ? rem : 0;
        num = num / 10;
        rem = 0;

        rem = num % 10;
        sum += rem % 2 == 0 ? rem : 0;
        num = num / 10;
        rem = 0;

        System.out.println("Sum of the even digit number is :
" + sum);

    }
}
```



b) Sum of all odd digits of any 4 digit number

```java
public class Assignment6_2 {
    public static void main(String[] args) {
        int num = 1243, rem = 0, sum = 0;

        rem = num % 10;
        sum += rem % 2 != 0 ? rem : 0;
        num = num / 10;
        rem = 0;

        rem = num % 10;
        sum += rem % 2 != 0 ? rem : 0;
        num = num / 10;
        rem = 0;

        rem = num % 10;
        sum += rem % 2 != 0 ? rem : 0;
        num = num / 10;
        rem = 0;
```

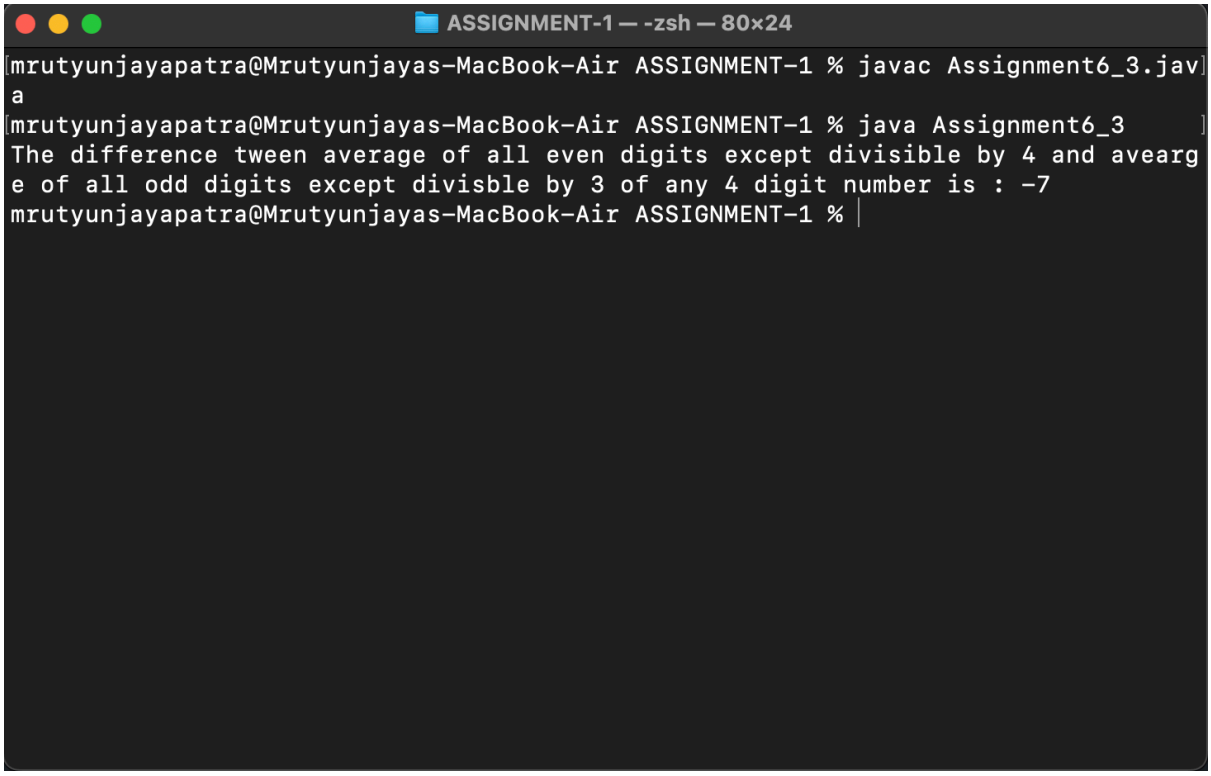
```
        rem = num % 10;
        sum += rem % 2 != 0 ? rem : 0;
        num = num / 10;
        rem = 0;

        System.out.println("Sum of all odd digit number is : "
+ sum);

    }
}
```



c) Difference between average of all even digits except divisible by 4 and avearge of all odd digits except divisble by 3 of any 4 digit number

```
public class Assignment6_3 {
    public static void main(String[] args) {
        int num=1334;
        int sum1=0,sum2=0,rem=0;
```

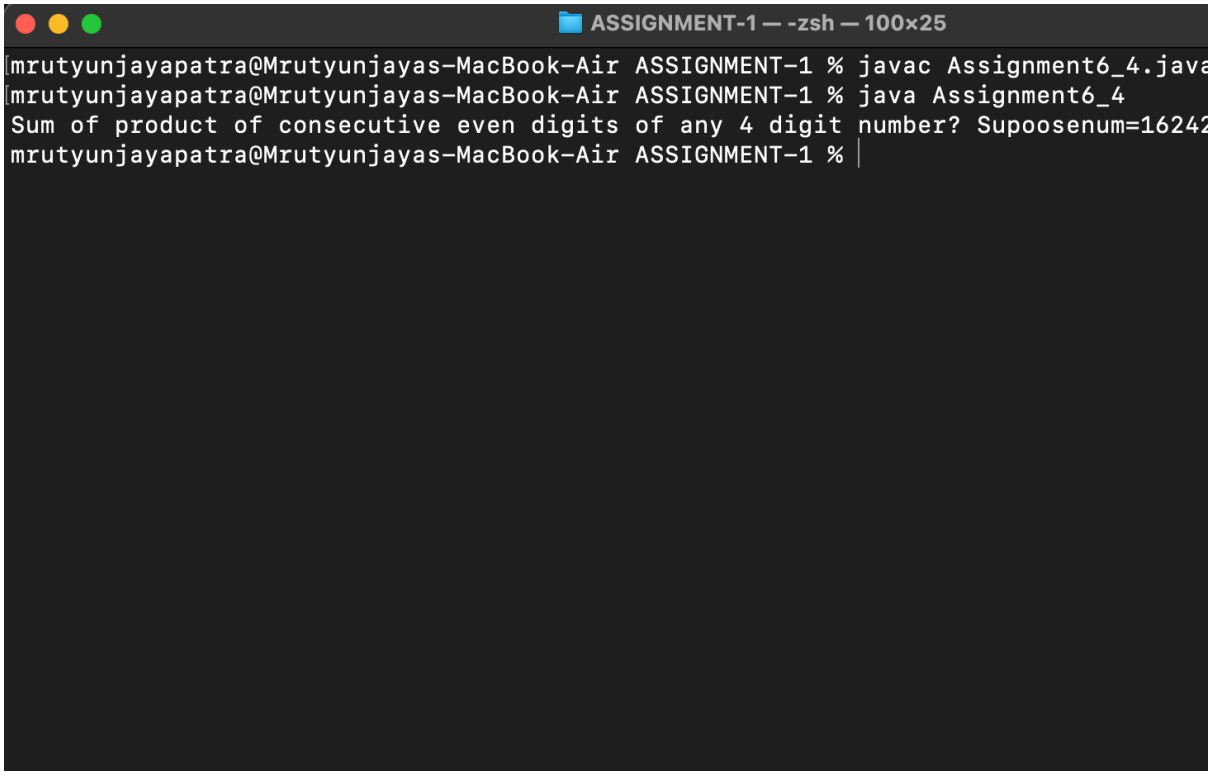
```
        rem=num%10;
        sum1+=(rem%2==0?(rem%4!=0?rem:0):0);
        sum2+=(rem%2!=0?rem:0);
        rem=0;
        num=num/10;



        rem=num%10;
        sum1+=(rem%2==0?(rem%4!=0?rem:0):0);
        sum2+=(rem%2!=0?rem:0);
        rem=0;
        num=num/10;


        rem=num%10;
        sum1+=(rem%2==0?(rem%4!=0?rem:0):0);
        sum2+=(rem%2!=0?rem:0);
        rem=0;
        num=num/10;


        rem=num%10;
        sum1+=(rem%2==0?(rem%4!=0?rem:0):0);
        sum2+=(rem%2!=0?rem:0);
        rem=0;
        num=num/10;


        System.out.println("The difference tween average of
all even digits except divisible by 4 and avearge of all odd
digits except divisble by 3 of any 4 digit number is :
"+(sum1-sum2));
    }
}
```



d) Sum of product of consecutive even digits of any 4 digit number?
Supoose num=1624 then output= 4*2+2*6

```
public class Assignment6_4 {
    public static void main(String[] args) {
        int num=1624;
        int a=0,b=0,c=0,d=0,rem=0;

        rem=num%10;
        a=rem%2==0?rem:0;
        num/=10;
        rem=0;


        rem=num%10;
        b=rem%2==0?rem:0;
        num/=10;
        rem=0;
```

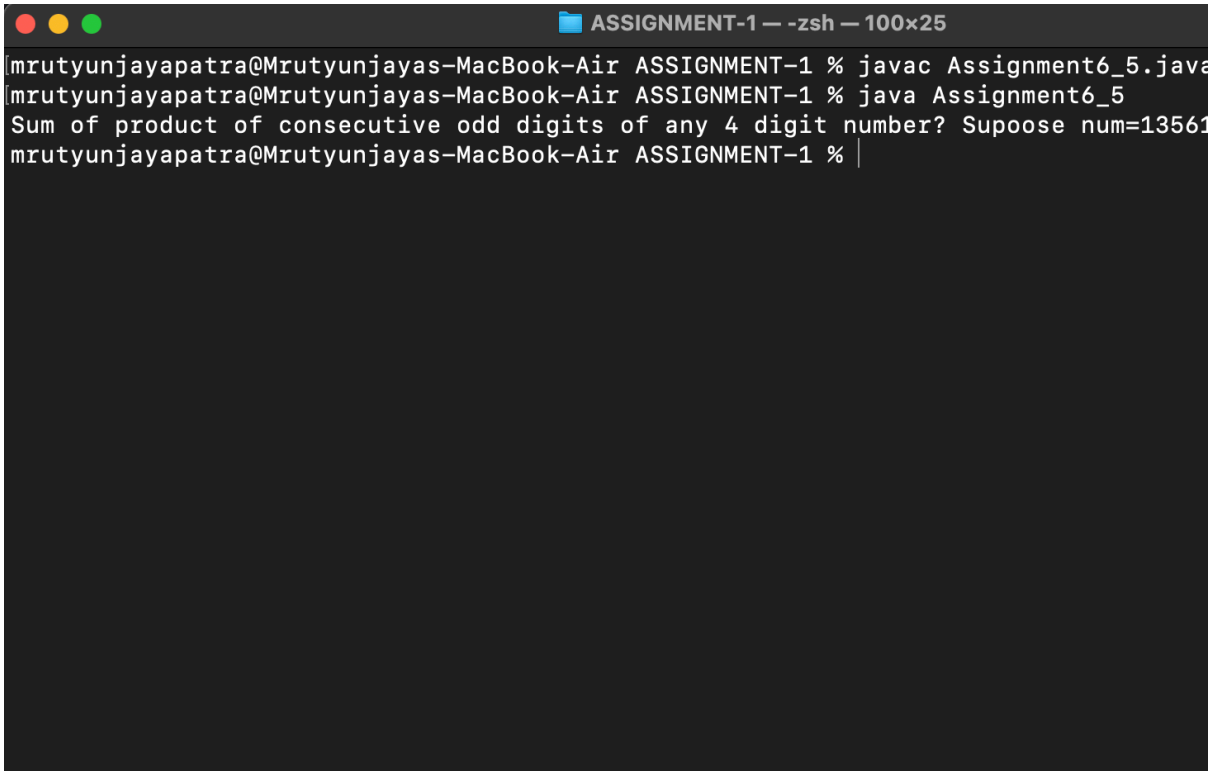
```
        rem=num%10;
        c=rem%2==0?rem:0;
        num/=10;
        rem=0;

        rem=num%10;
        d=rem%2==0?rem:0;
        num/=10;
        rem=0;

       int sum=0;

        sum+=((a!=0 && b!=0)?(a*b):0);
        sum+=((b!=0 && c!=0)?(b*c):0);
        sum+=((c!=0 && d!=0)?(c*d):0);


        System.out.println("Sum of product of consecutive even
digits of any 4 digit number? Supoosenum=1624"+sum);

    }
}
```



e) Sum of product of consecutive odd digits of any 4 digit number? Supoose num=1356 then output= 5*3+ 3*1

```
public class Assignment6_5 {
    public static void main(String[] args) {

        int num=1356;
        int a=0,b=0,c=0,d=0,rem=0;

        rem=num%10;
        a=rem%2!=0?rem:0;
        num/=10;
        rem=0;


        rem=num%10;
        b=rem%2!=0?rem:0;
        num/=10;
        rem=0;
```

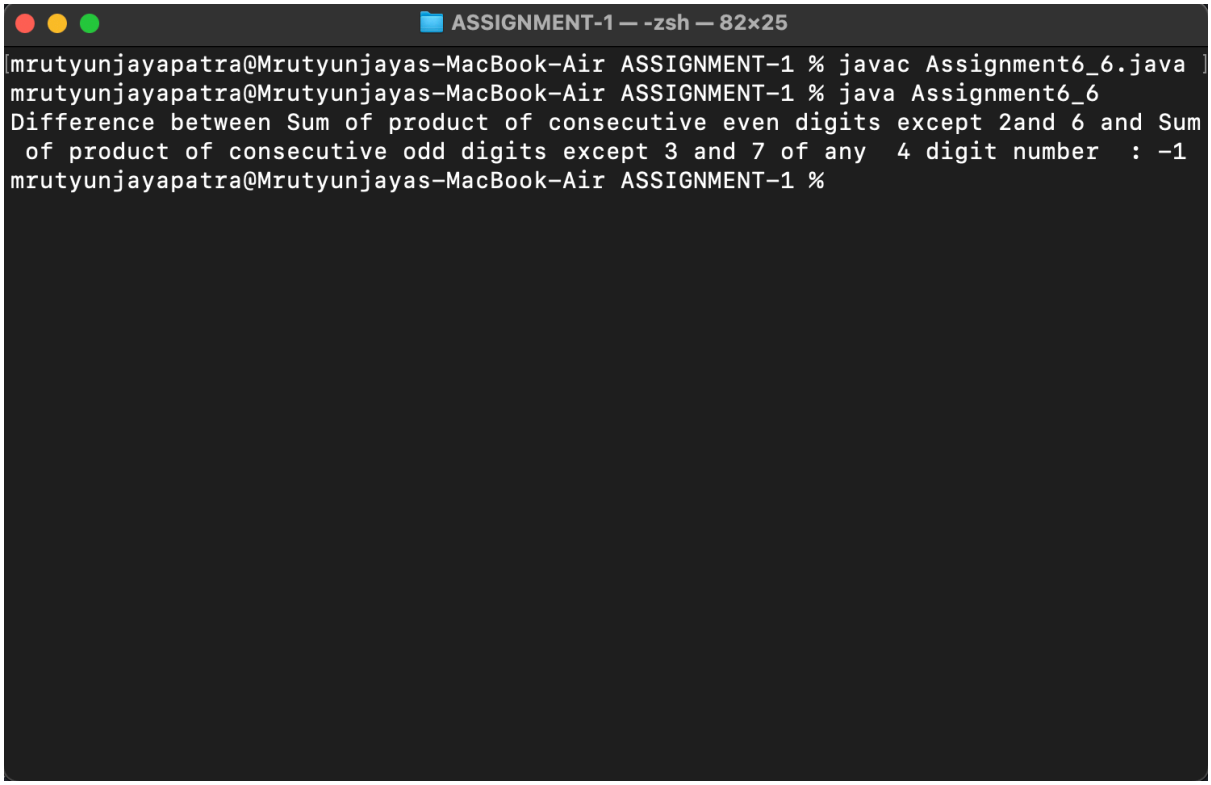
```
        rem=num%10;
        c=rem%2!=0?rem:0;
        num/=10;
        rem=0;

        rem=num%10;
        d=rem%2!=0?rem:0;
        num/=10;
        rem=0;

        int sum=0;

        sum+=((a!=0 && b!=0)?(a*b):0);
        sum+=((b!=0 && c!=0)?(b*c):0);
        sum+=((c!=0 && d!=0)?(c*d):0);


        System.out.println("Sum of product of consecutive odd
digits of any 4 digit number? Supoose num=1356"+sum);

    }
}
```



f) Difference between Sum of product of consecutive even digits except 2 and 6 and Sum of product of consecutive odd digits except 3 and 7 of any 4 digit number

```
public class Assignment6_6 {
    public static void main(String[] args) {
        int num=1122;
        int rem=0,a1,b1,c1,d1,a2,b2,c2,d2;

        rem=num%10;
        a1=((rem%2==0)?(rem!=2 && rem!=6?rem:0):0);
        a2=rem%2!=0?(rem!=3 && rem!=7?rem:0):0;
        num/=10;
        rem=0;


        rem=num%10;
        b1=((rem%2==0)?(rem!=2 && rem!=6?rem:0):0);
        b2=rem%2!=0?(rem!=3 && rem!=7?rem:0):0;
        num/=10;
```

```
        rem=0;


        rem=num%10;
        c1=((rem%2==0)?(rem!=2 && rem!=6?rem:0):0);
        c2=rem%2!=0?(rem!=3 && rem!=7?rem:0):0;
        num/=10;
        rem=0;


        rem=num%10;
        d1=((rem%2==0)?(rem!=2 && rem!=6?rem:0):0);
        d2=rem%2!=0?(rem!=3 && rem!=7?rem:0):0;
        num/=10;
        rem=0;



        int sum1=0,sum2=0;

        sum1+=(a1!=0 && b1!=0)?(a1*b1):0;
        sum1+=(b1!=0 && c1!=0)?(b1*c1):0;
        sum1+=(c1!=0 && d1!=0)?(c1*d1):0;


        sum2+=(a2!=0 && b2!=0)?(a2*b2):0;
        sum2+=(b2!=0 && c2!=0)?(b2*c2):0;
        sum2+=(c2!=0 && d2!=0)?(c2*d2):0;

       System.out.println("Difference between Sum of product
of consecutive even digits except 2and 6 and Sum of product of
consecutive odd digits except 3 and 7 of any  4 digit number
: "+(sum1-sum2));


    }
}
```



g) Write a java program to find sum of product of corresponding even digits of first any digit number and corresponding odd digit of any 4 digit number Such as n=1234 m=4567 output=4*7+2*5

```java
public class Assignment6_7 {
    public static void main(String[] args) {
        int m = 1234, n = 4567;
        int ans = 0, rem = 0;
        int a1, b1, c1, d1;
        int a2, b2, c2, d2;

        //First number
        rem = m % 10;
        a1 = rem % 2 == 0 ? rem : 0;
        rem = 0;
        m /= 10;
        System.out.println(a1);

        rem = m % 10;
        b1 = rem % 2 == 0 ? rem : 0;
```

```
        rem = 0;
        m /= 10;

        rem = m % 10;
        c1 = rem % 2 == 0 ? rem : 0;
        rem = 0;
        m /= 10;

        rem = m % 10;
        d1 = rem % 2 == 0 ? rem : 0;
        rem = 0;
        m /= 10;


        // second number
        rem = n % 10;
        a2 = rem % 2 != 0 ? rem : 0;
        rem = 0;
        n /= 10;

        rem = n % 10;
        b2 = rem % 2 != 0 ? rem : 0;
        rem = 0;
        n /= 10;

        rem = n % 10;
        c2 = rem % 2 != 0 ? rem : 0;
        rem = 0;
        n /= 10;

        rem = n % 10;
        d2 = rem % 2 != 0 ? rem : 0;
        rem = 0;
        n /= 10;

        ans += (a1 != 0 && a2 != 0) ? a1 * a2 : 0;
```

```
        ans += (b1 != 0 && b2 != 0) ? b1 * b2 : 0;
        ans += (c1 != 0 && c2 != 0) ? c1 * c2 : 0;
        ans += (d1 != 0 && d2 != 0) ? d1 * d2 : 0;

        System.out.println("Sum of product of corresponding
even digits of first any digit number and corresponding odd
digit of any 4 digit number Such as n=1234 m=4567"+ans);

    }
}
```