

File Edit Format View Help

```
void printDetails(){
    System.out.println("The book details are:");
    System.out.println("book id: " + bookid);
    System.out.println("book title: " + booktitle);
    System.out.println("no of pages: " + no_of_pages);
    System.out.println("year of publish: " + year_of_pub);
    System.out.println("author name: " + author);
    System.out.println("publisher: " + publisher);
    System.out.println("price: " + price);
}

String bookByAuthor(){
    return author;
}

double expensive(){
    return price;
}

int count(){
    return year_of_pub;
}

int pages(){
    return no_of_pages;
}

}

public class BookDetails {
    public static void main(String[] args){
        Book b1 = new Book();
    }
}
```

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```
public class BookDetails {  
    public static void main(String[] args){  
        Book b1 = new Book();  
        Book b2 = new Book();  
        Book b3 = new Book();  
        Scanner sc = new Scanner(System.in);  
        System.out.println("\n\nBook 1");  
        b1.getDetails();  
        System.out.println("\n\nBook 2");  
        b2.getDetails();  
        System.out.println("\n\nBook 3");  
        b3.getDetails();  
        System.out.println("\n\nBook 1");  
        b1.printDetails();  
        System.out.println("\n\nBook 2");  
        b2.printDetails();  
        System.out.println("\n\nBook 3");  
        b3.printDetails();  
  
        String auth, bk1, bk2, bk3;  
        System.out.println("\n\nEnter author name to find his book:");  
        auth = sc.next();  
        bk1 = b1.bookByAuthor();  
        if (bk1.equals(auth)){  
            b1.printDetails();  
        }  
        bk2 = b2.bookByAuthor();  
        if (bk2.equals(auth)){  
            b2.printDetails();  
        }  
        bk3 = b3.bookByAuthor();
```



```
}
bk3 = b3.bookByAuthor();
if (bk3.equals(auth)){
    b3.printDetails();
}

double p1, p2, p3;
p1 = b1.expensive();
p2 = b2.expensive();
p3 = b3.expensive();
System.out.println("\n\nThe details of most expensive book are:");
if(p1>p2){
    if(p1>p3){
        b1.printDetails();
    }
    else{
        b3.printDetails();
    }
}
else {
    if(p2>p3){
        b2.printDetails();
    }
    else{
        b3.printDetails();
    }
}

int count = 0,c1, c2, c3;
c1 = b1.count();
if(c1==2020){
```

```
}
c2 = b2.count();
if(c2==2020){
    count++;
}
c3 = b3.count();
if(c3==2020){
    count++;
}
System.out.println("\n\nno of books published in 2020: "+ count);

int page, pg1, pg2, pg3;
pg1=b1.pages();
pg2=b2.pages();
pg3=b3.pages();
System.out.println("\n\nbook with least pages:");
    if(pg1<pg2){
        if(pg1<pg3){
            b1.printDetails();
        }
        else{
            b3.printDetails();
        }
    }
    else {
        if(pg2<pg3){
            b2.printDetails();
        }
        else{
            b3.printDetails();
        }
    }
}
```



```
C:\Users\Pankaj Gupta\Desktop\Java Lab1>javac BookDetails.java
```

```
C:\Users\Pankaj Gupta\Desktop\Java Lab1>java BookDetails
```

```
Book 1
```

```
Enter book id:
```

```
10
```

```
Enter book title:
```

```
java
```

```
Enter no of pages:
```

```
400
```

```
Enter year of pub:
```

```
2020
```

```
Enter author name:
```

```
xyz
```

```
Enter publisher name:
```

```
Mcgraw
```

```
Enter price:
```

```
750
```

```
Book 2
```

```
Enter book id:
```

```
11
```

```
Enter book title:
```

```
C
```

```
Enter no of pages:
```

```
500
```

```
Enter year of pub:
```

```
2016
```

```
Enter author name:
```

```
abc
```

```
Enter publisher name:
```

```
Mcgraw
```

```
Enter price:
```

```
250
```

```
Book 3
```

```
Enter book id:
```

```
12
```

```
Enter book title:
```



Command Prompt

```
Book 3
Enter book id:
12
Enter book title:
OOP
Enter no of pages:
700
Enter year of pub:
2018
Enter author name:
uvw
Enter publisher name:
Mcgraw
Enter price:
1000
```

```
Book 1
The book details are:
book id: 10
book title: java
no of pages: 400
year of publish: 2020
author name: xyz
publisher: Mcgraw
price: 750.0
```

```
Book 2
The book details are:
book id: 11
book title: C
no of pages: 500
year of publish: 2016
author name: abc
publisher: Mcgraw
price: 250.0
```

```
Book 3
The book details are:
book id: 12
book title: OOP
```

Book 3

The book details are:

book id: 12

book title: OOP

no of pages: 700

year of publish: 2018

author name: uvw

publisher: McGraw

price: 1000.0

Enter author name to find his book:

abc

The book details are:

book id: 11

book title: C

no of pages: 500

year of publish: 2016

author name: abc

publisher: McGraw

price: 250.0

The details of most expensive book are:

The book details are:

book id: 12

book title: OOP

no of pages: 700

year of publish: 2018

author name: uvw

publisher: McGraw

price: 1000.0

no of books published in 2020: 1

book with least pages:

The book details are:

book id: 10

book title: java

no of pages: 400

year of publish: 2020



```
Command Prompt
author name: uvw
publisher: McGraw
price: 1000.0

Enter author name to find his book:
abc
The book details are:
book id: 11
book title: C
no of pages: 500
year of publish: 2016
author name: abc
publisher: McGraw
price: 250.0

The details of most expensive book are:
The book details are:
book id: 12
book title: OOP
no of pages: 700
year of publish: 2018
author name: uvw
publisher: McGraw
price: 1000.0

no of books published in 2020: 1

book with least pages:
The book details are:
book id: 10
book title: java
no of pages: 400
year of publish: 2020
author name: xyz
publisher: McGraw
price: 750.0

C:\Users\Pankaj Gupta\Desktop\Java Lab1>
```



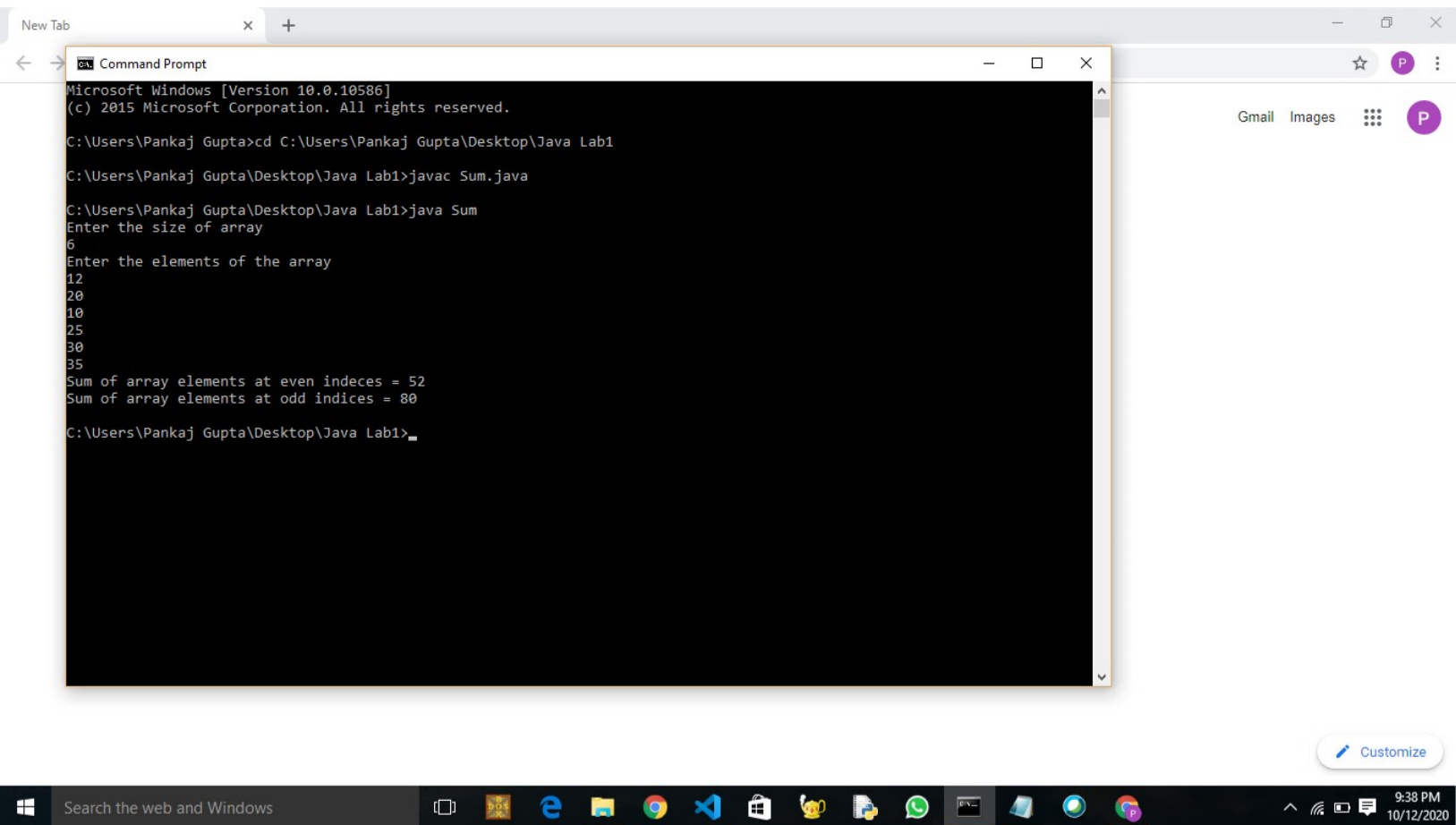
## Sum - Notepad

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```
import java.util.Scanner;
class Sum{
    public static void main(String args[]){
        Scanner in=new Scanner(System.in);
        System.out.println("Enter the size of array");

        int n;
        n=in.nextInt();
        int arr[]=new int[n];
        int sumodd=0,sumeven=0;
        System.out.println("Enter the elements of the array");
        for(int i=0;i<n;i++){
            arr[i]=in.nextInt();
        }
        for(int i=0;i<n;i++){
            if(i%2==0)
                sumeven+=arr[i];
            else
                sumodd+=arr[i];
        }
        System.out.println("Sum of array elements at even indeces = "+sumeven);
        System.out.println("Sum of array elements at odd indices = "+sumodd);
    }
}
```





## Counting - Notepad

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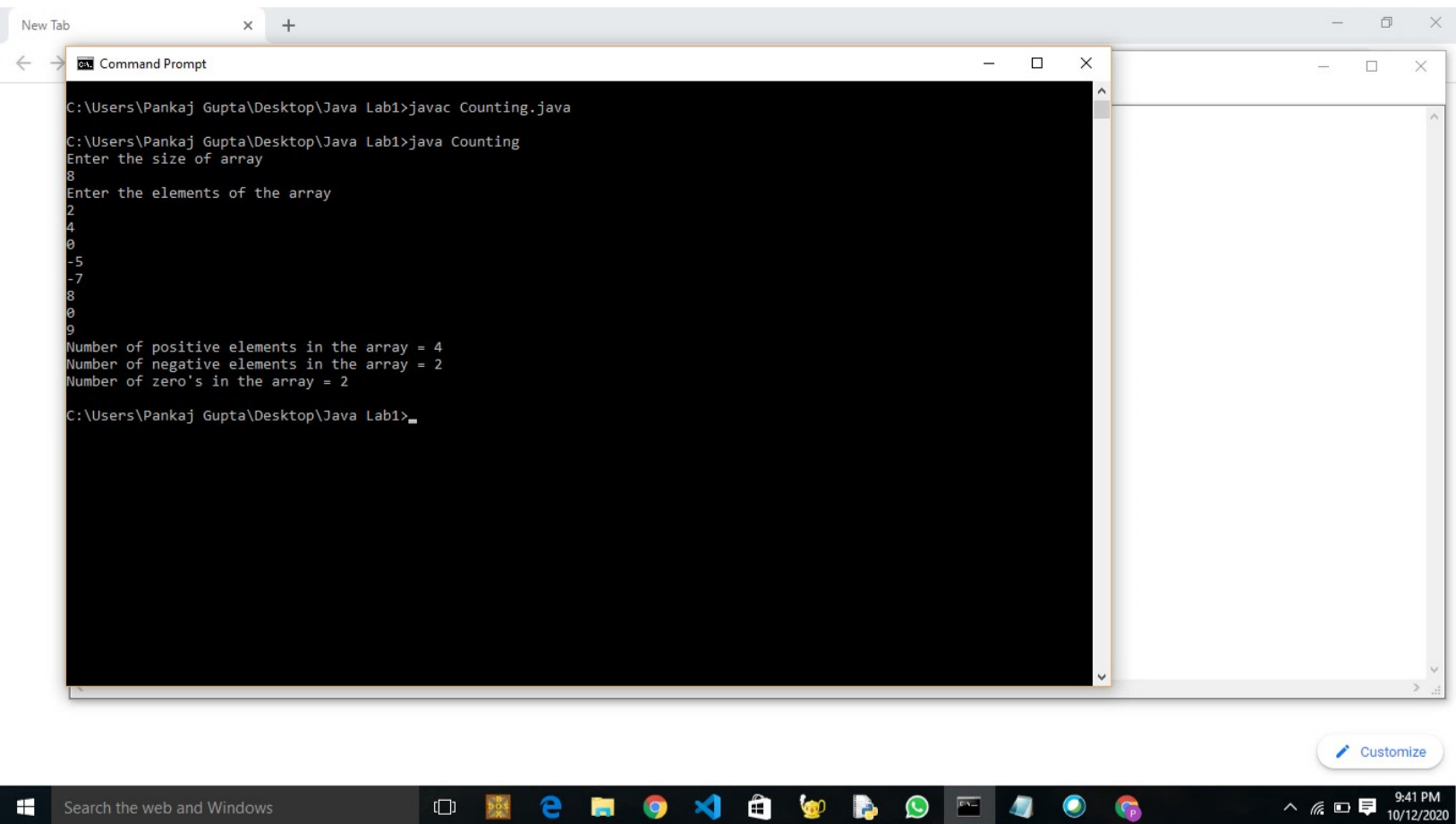
```
import java.util.Scanner;
class Counting{
    public static void main(String args[]){
        Scanner in=new Scanner(System.in);
        System.out.println("Enter the size of array");

        int n,positive=0,negative=0,zero=0;
        n=in.nextInt();
        int arr[]=new int[n];
        System.out.println("Enter the elements of the array");
        for(int i=0;i<n;i++){
            arr[i]=in.nextInt();
        }
        for(int i=0;i<n;i++){
            if(arr[i]>0)
                positive++;
            else if(arr[i]<0)
                negative++;
            else
                zero++;
        }
        System.out.println("Number of positive elements in the array = "+positive);
        System.out.println("Number of negative elements in the array = "+negative);
        System.out.println("Number of zero's in the array = "+zero);
    }
}
```

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## Billing - Notepad

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```
import java.util.*;
class Billing{
    public static void main(String args[]){
        Scanner in = new Scanner(System.in);
        int x,i;
        System.out.println("Enter number of items purchased");
        x = in.nextInt();
        double rate[] = new double[x];
        int item[] = new int[x];
        System.out.println("Enter the rate of each item purchased");
        for(i=0;i<x;i++){
            rate[i] = in.nextDouble();
        }
        System.out.println("Enter the Quantity of each item purchased in order");
        for(i=0;i<x;i++){
            item[i] = in.nextInt();
        }
        double total=0,final_bill=0;
        for(i=0;i<x;i++){
            total+=rate[i]*item[i];
        }
        if(total>=10000){
            System.out.println("Your total bill is "+total+" so you get 5% discount");
            final_bill=total-total*5/(100);
            System.out.println("So your final bill = "+final_bill);
        }
        else if(total>=7500){
            System.out.println("Your total bill is "+total+" so you get 3% discount");
            final_bill = total-total*3/(100);
            System.out.println("So your final bill = "+final_bill);
        }
    }
}
```

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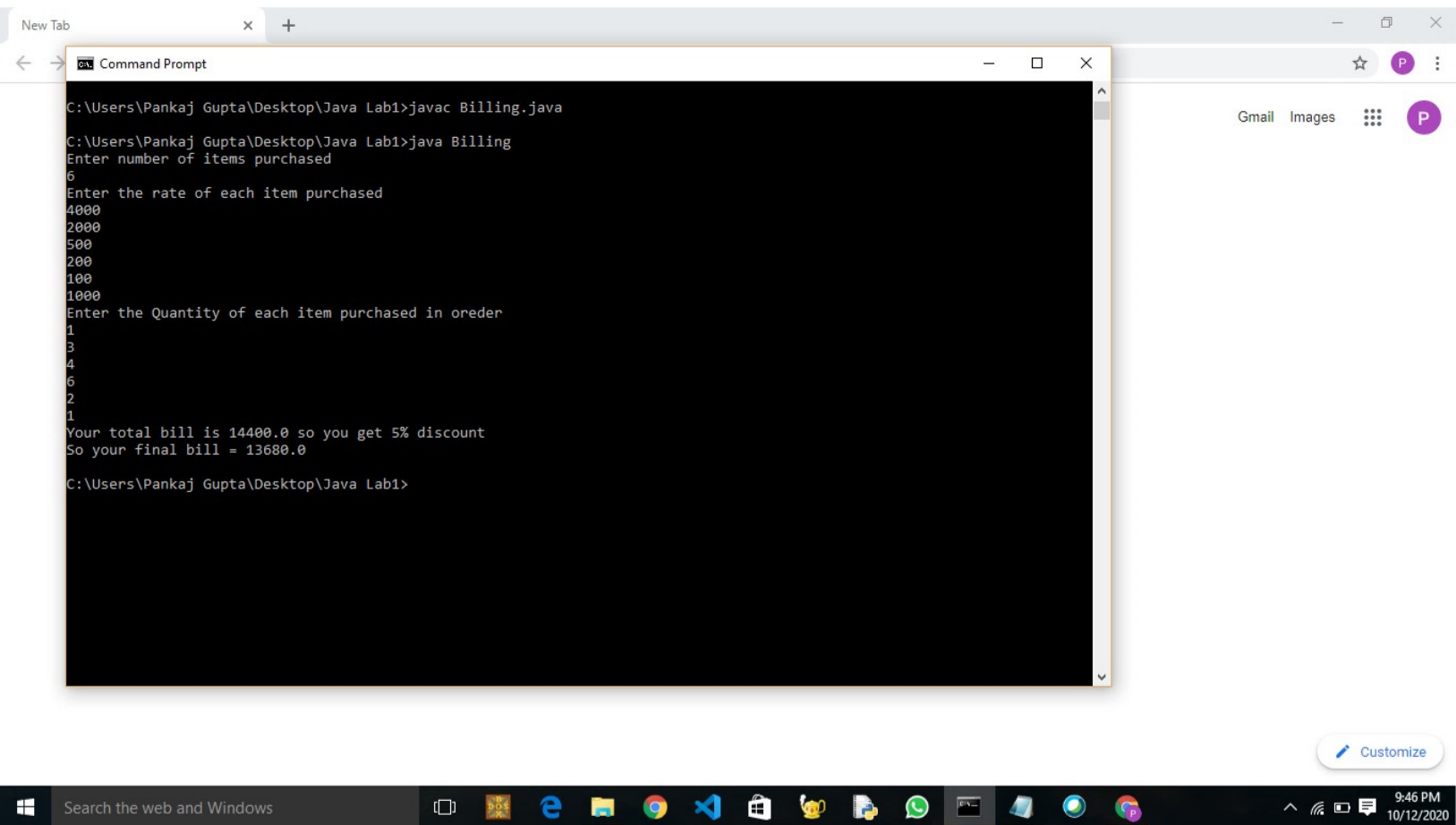
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```
System.out.println("Enter the Quantity of each item purchased in order");
for(i=0;i<x;i++){
    item[i]= in.nextInt();
}
double total=0,final_bill=0;
for(i=0;i<x;i++){
    total+=rate[i]*item[i];
}
if(total>=10000){
    System.out.println("Your total bill is "+total+" so you get 5% discount");
    final_bill=total-total*5/(100);
    System.out.println("So your final bill = "+final_bill);
}
else if(total>=7500){
    System.out.println("Your total bill is "+total+" so you get 3% discount");
    final_bill = total-total*3/(100);
    System.out.println("So your final bill = "+final_bill);
}
else if(total>=5000){
    System.out.println("Your total bill is "+total+" so you get 2% discount");
    final_bill=total-total*2/(100);

    System.out.println("So your final bill = "+final_bill);
}
else{
    System.out.println("Your total bill is "+total+" so you get no discount");
    final_bill = total;
    System.out.println("So your final bill = "+final_bill);
}
}
```





OperationsOnArray - Notepad

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```
import java.util.*;
class OperationsOnArray{
    public static void main(String args[]){
        int n,i=0;
        Scanner in = new Scanner(System.in);
        System.out.println("Enter the size of first array");
        n=in.nextInt();
        int arrA[] = new int[n];
        System.out.println("Enter the elements of array A");
        for( i=0;i<n;i++){
            arrA[i] = in.nextInt();
        }

        int arrB[]=new int[n];
        int arrC[]=new int[n];
        int j=0,k=0;
        for( i=0;i<n;i++){
            if(arrA[i]%2==0){
                arrC[j] = arrA[i];
                j++;
            }
            else if(arrA[i]%2!=0){
                arrB[k] = arrA[i];
                k++;
            }
        }
        System.out.println("Array C is");
        for( i=0;i<j;i++){
            System.out.println(arrC[i]);
        }
        int min=0,max=0,count=0;
```

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```
        k++;
    }
}
System.out.println("Array C is");
for( i=0;i<j;i++)
    System.out.println(arrC[i]);
int min=0,max=0,count=0;
double avg,sum=0;
min=arrC[0];
for(i=0;i<j;i++){
    if(min>arrC[i]){
        min=arrC[i];
    }
}
max=arrC[0];
for(i=0;i<j;i++){
    sum+=arrC[i];
    count++;
    if(max<arrC[i]){
        max=arrC[i];
    }
}
System.out.println("Maximum of array C is "+max);
System.out.println("Minimum of array C is "+min);
avg=sum/count;
System.out.println("Sum of array C is "+sum);
System.out.println("Average of array C is "+avg);
}
```

}





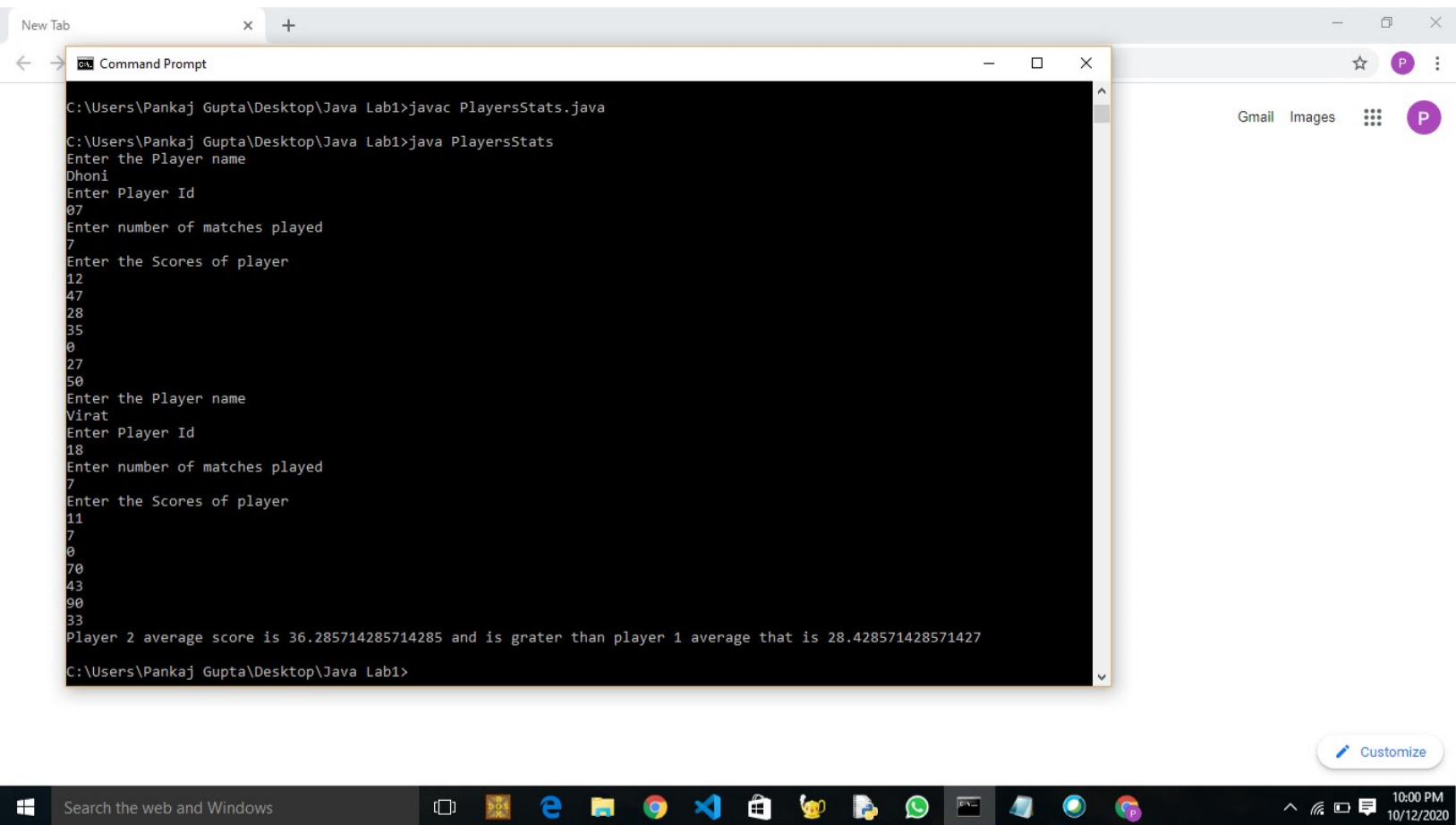
## PlayersStats - Notepad

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```
import java.util.*;
class Player{
    int id;
    String name;
    int matches;
    int score[]=new int[matches];
    void setDim(){
        Scanner in = new Scanner(System.in);
        System.out.println("Enter the Player name");
        name = in.nextLine();
        System.out.println("Enter Player Id");
        id = in.nextInt();
        System.out.println("Enter number of matches played");
        matches = in.nextInt();
        System.out.println("Enter the Scores of player");
        score = new int[matches];
        for(int i=0;i<matches;i++){
            score[i]=in.nextInt();
        }
    }
    double Calculate(){
        double avg=0;
        for(int i=0;i<matches;i++)
            avg+=score[i];
        return avg/matches;
    }
}
class PlayersStats{
    public static void main(String args[]){
        Player p1 = new Player();
        Player p2 = new Player();
    }
}
```

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```
        System.out.println("Enter number of matches played");
        matches = in.nextInt();
        System.out.println("Enter the Scores of player");
        score = new int[matches];
        for(int i=0;i<matches;i++){
            score[i]=in.nextInt();
        }
    }
    double Calculate(){
        double avg=0;
        for(int i=0;i<matches;i++){
            avg+=score[i];
        }
        return avg/matches;
    }
}
class PlayersStats{
    public static void main(String args[]){
        Player p1 = new Player();
        Player p2 = new Player();
        p1.setDim();
        p2.setDim();
        if(p1.Calculate()>p2.Calculate())
            System.out.println("Player 1 average score is "+p1.Calculate()+" and is grater than player 2 average that is "+p2.Calculate());
        else
            System.out.println("Player 2 average score is "+p2.Calculate()+" and is grater than player 1 average that is "+p1.Calculate());
    }
}
```



```
import java.util.Scanner;
class Book{
    private String bookid;
    private String booktitle;
    private int no_of_pages;
    private int year_of_pub;
    private String author;
    private String publisher;
    private double price;
    Scanner sc = new Scanner(System.in);
    void getDetails(){
        System.out.println("Enter book id:");
        bookid = sc.next();
        System.out.println("Enter book title:");
        booktitle = sc.next();
        System.out.println("Enter no of pages:");
        no_of_pages = sc.nextInt();
        System.out.println("Enter year of pub:");
        year_of_pub = sc.nextInt();
        System.out.println("Enter author name:");
        author = sc.next();
        System.out.println("Enter publisher name:");
        publisher = sc.next();
        System.out.println("Enter price:");
        price = sc.nextDouble();
    }

    void printDetails(){
        System.out.println("The book details are:");
        System.out.println("book id: " + bookid);
        System.out.println("book title: " + booktitle);
    }
}
```