Week 4 (Extra questions)

1.
```
import java.util.Scanner;
class Player
{
 String id, name;
 int no_of_matches_played, i, sum;
 float avg;
 int scores[];
 Player()
 {
 Scanner sc=new Scanner(System.in);
 System.out.println("Enter the number of matches
  played ");
 no_matches_played = sc.nextInt();
 scores = new int[no_matches_played];
  sum=0;
 }
 void accept()
 {
 Scanner sc=new Scanner(System.in);
 System.out.println("Enter id and name");
 id= sc.next();
 name = sc.next();
 for(i=0; i<no_matchesplayed; i++)
 {
 System.out.println("Enter "+(i+1)+" matchs scor");
 scores[i]= sc.nextInt();
 }
}
void calU
{
for(i=0; i<no_matches_played; i++)
{
  sum= sum+ scores[i];
}
```

```
        avg = (float)sum/no_matches_played;
    }
    void display()
    {
        System.out.println("Player details:");
        System.out.println("Name: " + name);
        System.out.println("ID: " +id);
        System.out.println("Average score: %.2f \n", avg);
    }
}
class PlayerMain
{
    public static void main(String args[])
    {
        Player p1 = new Player();
        p1.accept();
        p1.cal();
        p1.display();
        Player p2 = new Player();
        p2.accept();
        p2.cal();
        p2.display();
        if (p1.avg > p2.avg)
        {
            System.out.println(p1.name+"has a higher
            average score");
            System.out.println("Details:");
            System.out.println("ID: " +p1.id);
            System.out.printf("Average score: %.2f\n",
            p1.avg);
            System.out.println("Number of matches
            played: "+p1.no_matches_played);
        }
```

```
        if (p1.avg < p2.avg)
        {
        System.out.println(p2.name+ " has a higher
        average score");
        System.out.println("Details: ");
        System.out.println("ID: " + p2.id);
        System.out.println("Average score: %.2f\n",
          p2.avg);
        System.out.println("Number of matches
        played: " + p2.no_matches_played);
        }
    }
}
```

2.
```
import java.util.Scanner;
class Bbok
{
    String bookid, booktitle, author, publisher;
    int no_of_pages, year_of_pub, i;
    float price;
    void accept()
    {
    Scanner sc=new Scanner(System.in);
    System.out.println("Enter book id, title,
    author, publisher, number of pages in the
    book, price and year of publishing");
    bookid=sc.next();
    booktitle=sc.next();
    author = sc.next
    publisher=sc.next
    no_of_pages = sc.nextInt();
    price= sc.nextFloat();
    year_of_pub = sc.nextInt();
}
```

```
static void display_mostExpensive(int k, Book b[])
{
System.out.println("Book title of the most
 expensive book: " + b[k].bookTitle);
}
static void display_2020(int c)
{
 System.out.println("Count of the books
 published in the year 2020: " + c);
}

static void display_least_pages(int l, Book b[])
{
 System.out.println("Book details of the book
 with the least number of pages:");
 System.out.println("Title: " + b[l].bookTitle);
 System.out.println("BookID: " + b[l].bookid);
 System.out.println("Author: " + b[l].author);
 System.out.println("Publisher: " b[l].publisher);
 System.out.println("Number of pages in the
  book: " + b[l].no_of_pages);
 System.out.println("Price: " + b[l].price);
 System.out.println("year of publishing: " +
  b[l].year_of_pub);
}

void display()
{
 System.out.println("Book details:");
 System.out.println("Title: " + bookTitle);
 System.out.println("BookID: " + bookid);
System.out.println("Author: " + author);
System.out.println("Publisher: " + publisher);
System.out.println("Number of pages in the
  book: " + no_of_pages);
```

```
System.out.println("Price: "+price);
System.out.println("Year of publishing: "
  + year_of_pub);
}
Static void accept_authorName(Book b[])
{
  String a;
  Scanner sc= new Scanner(System.in);
  System.out.println("Mention the author
  name whose book details need to be
  displayed");
  a=sc.next()
  System.out.println("Book details:");
  for(int i=0; i<3; i++)
  {
    if (a.equals(b[i].author))
    {
    System.out.println("Title: "+b[i].booktitle);
    System.out.println("Book ID: "+b[i].bookid);
    System.out.println("Publisher: "+b[i].publi
    System.out.println" Number of pages in the
    book: "+b[i].no_of_pages);
    System.out.println("Price: "+b[i].price);
    System.out.println" Year of publishing:"
      +b[i].year_of_pub);
    }
  }
}
}
class BookMain
{
  public static void main(String args[])
  {
    int i, k=0, c=0, l=0;
    Book b[]= new Book[3]; //Only array of
                           references is created.
```

```
for(i=0; i<3; i++)
{
 b[i]=new Book(); // creation of object.
}
for(i=0; i<3; i++)
 {
  b[i].accept();
 }
for(i=0; i<3; i++)
 {
  b[i].display();
 }
Book.accept_authorName(b);
if(b[0].price>b[1].price && b[0].price>b[2].price)
 k=0;
else if(b[1].price>b[0].price && b[1].price>b[2].price)
 k=1;
else if(b[2].price>b[1].price && b[2].price>b[0].price)
 k=2;
Book.display_mostExpensive(k,b);
for(i=0; i<3 i++)
{
 if(b[i].year_of_pub==2020)
  c++;
}
Book.display_2020(c);
if(b[0].no_of_pages<b[1].no_of_pages && b[0].no_of
_pages<b[2].no_of_pages)
 l=0;
else if(b[1].no_of_pages<b[0].no_of_pages && b[1].
 no_of_pages<b[2].no_of_pages)
 l=1;
 else if(b[2].no_of_pages<b[1].no_of_pages && b[2].no_
 of_pages<b[0].no_of_pages)
 l=2;
}3 Book.display_least_pages(l,b);
```

```
import java.util.Scanner;
class Player
{
  String id,name;
  int no_matches_played,i,sum;
  float avg;
  int scores[];
  Player()
  {
  Scanner sc=new Scanner(System.in);
  System.out.println("Enter the number of matches played");
  no_matches_played=sc.nextInt();
  scores=new int[no_matches_played];
  sum=0;
  }
  void accept()
  {
  Scanner sc=new Scanner(System.in);
  System.out.println("Enter id and name");
  id=sc.next();
  name=sc.next();
  for(i=0;i<no_matches_played;i++)
  {
  System.out.println("Enter "+(i+1)+" match's score");
  scores[i]=sc.nextInt();
  }
  }
  void cal()
  {
```

```
  for(i=0;i<no_matches_played;i++)
  {
    sum=sum+scores[i];
  }
  avg=(float)sum/no_matches_played;
  }
  void display()
  {
  System.out.println("Player details:");
  System.out.println("Name: "+name);
  System.out.println("ID: "+id);
  System.out.printf("Average score: %.2f\n",avg);
  }
}
class PlayerMain
{
  public static void main(String args[])
  {
  Player p1 = new Player();
  p1.accept();
  p1.cal();
  p1.display();
  Player p2 = new Player();
  p2.accept();
  p2.cal();
  p2.display();
  if(p1.avg>p2.avg)
  {
    System.out.println(p1.name+" has a higher average score");
```

```
    System.out.println("Details:");
    System.out.println("ID: "+p1.id);
    System.out.printf("Average score: %.2f\n",p1.avg);
    System.out.println("Number of matches played: "+p1.no_matches_played);
  }
    if(p1.avg<p2.avg)
  {
    System.out.println(p2.name+" has a higher average score");
    System.out.println("Details:");
    System.out.println("ID: "+p2.id);
    System.out.printf("Average score: %.2f\n",p2.avg);
    System.out.println("Number of matches played: "+p2.no_matches_played);
  }
}}
```

```
C:\Users\Adithi\Desktop\java_prgs>java PlayerMain
Enter the number of matches played
3
Enter id and name
25
Player1
Enter 1 match's score
59
Enter 2 match's score
63
Enter 3 match's score
87
Player details:
Name: Player1
ID: 25
Average score: 69.67
Enter the number of matches played
2
Enter id and name
37
Player2
Enter 1 match's score
30
Enter 2 match's score
90
Player details:
Name: Player2
ID: 37
Average score: 60.00
Player1 has a higher average score
Details:
ID: 25
Average score: 69.67
Number of matches played: 3

C:\Users\Adithi\Desktop\java_prgs>
```

```
import java.util.Scanner;
class Book
{
  String bookid,booktitle,author,publisher;
  int no_of_pages,year_of_pub,i;
  float price;

  void accept()
  {
  Scanner sc=new Scanner(System.in);
  System.out.println("Enter book id, title, author, publisher, number of pages in the book, price and year of publishing");
  bookid=sc.next();
  booktitle=sc.next();
  author=sc.next();
  publisher=sc.next();
  no_of_pages=sc.nextInt();
  price=sc.nextFloat();
  year_of_pub=sc.nextInt();
  }

  static void display_mostExpensive(int k,Book b[])
  {
    System.out.println("Book title of the most expensive book: "+b[k].booktitle);
  }

  static void display_2020(int c)
  {
    System.out.println("Count of the books published in the year 2020: "+c);
```

```
}

static void dispaly_least_pages(int l,Book b[])
{
  System.out.println("Book details of the book with the least number of pages:");
  System.out.println("Title: "+b[l].booktitle);
  System.out.println("Book ID: "+b[l].bookid);
  System.out.println("Author: "+b[l].author);
  System.out.println("Publisher: "+b[l].publisher);
  System.out.println("Number of pages in the book: "+b[l].no_of_pages);
  System.out.println("Price: "+b[l].price);
  System.out.println("Year of publishing: "+b[l].year_of_pub);
  }

void display()
{
System.out.println("Book details:");
System.out.println("Title: "+booktitle);
System.out.println("Book ID: "+bookid);
System.out.println("Author: "+author);
System.out.println("Publisher: "+publisher);
System.out.println("Number of pages in the book: "+no_of_pages);
System.out.println("Price: "+price);
System.out.println("Year of publishing: "+year_of_pub);
}
static void accept_authorName(Book b[])
{
  String a;
  Scanner sc=new Scanner(System.in);
```

```
    System.out.println("Mention the author's name whose book details need to be dispalyed");
    a=sc.next();
    System.out.println("Book details:");
    for(int i=0;i<3;i++)
    {
      if(a.equals(b[i].author))
      {
        System.out.println("Title: "+b[i].booktitle);
        System.out.println("Book ID: "+b[i].bookid);
        System.out.println("Publisher: "+b[i].publisher);
        System.out.println("Number of pages in the book: "+b[i].no_of_pages);
        System.out.println("Price: "+b[i].price);
        System.out.println("Year of publishing: "+b[i].year_of_pub);
      }
    }
  }
}
class BookMain
{
  public static void main(String args[])
  {
    int i,k=0,c=0,l=0;
    Book b[]    = new Book[3];
    for(i=0;i<3;i++)
    {
      b[i]=new Book();
    }
    for(i=0;i<3;i++)
    {
```

```
  b[i].accept();
 }
 for(i=0;i<3;i++)
 {
  b[i].display();
 }
 Book.accept_authorName(b);
 if(b[0].price>b[1].price && b[0].price>b[2].price)
 k=0;
 else if(b[1].price>b[0].price && b[1].price>b[2].price)
 k=1;
 else if(b[2].price>b[1].price && b[2].price>b[0].price)
 k=2;
 Book.display_mostExpensive(k,b);
 for(i=0;i<3;i++)
 {
  if(b[i].year_of_pub==2020)
  c++;
 }
 Book.display_2020(c);
 if(b[0].no_of_pages<b[1].no_of_pages && b[0].no_of_pages<b[2].no_of_pages)
 l=0;
 else if(b[1].no_of_pages<b[0].no_of_pages && b[1].no_of_pages<b[2].no_of_pages)
 l=1;
 else if(b[2].no_of_pages<b[1].no_of_pages && b[2].no_of_pages<b[0].no_of_pages)
 l=2;
 Book.dispaly_least_pages(l,b);

}
```

}

```
C:\Users\Adithi\Desktop\java_prgs>java BookMain
Enter book id, title, author, publisher, number of pages in the book, price and year of publishing
123
Title1
Author1
Publisher1
100
1000
2018
Enter book id, title, author, publisher, number of pages in the book, price and year of publishing
234
Title2
Author2
Publisher2
200
2000
2019
Enter book id, title, author, publisher, number of pages in the book, price and year of publishing
345
Title3
Author3
Publisher3
300
3000
2020
Book details:
Title: Title1
Book ID: 123
Author: Author1
Publisher: Publisher1
Number of pages in the book: 100
Price: 1000.0
Year of publishing: 2018
Book details:
Title: Title2
Book ID: 234
Author: Author2
Publisher: Publisher2
Number of pages in the book: 200
Price: 2000.0
Year of publishing: 2019
Book details:
Title: Title3
Book ID: 345
Author: Author3
Publisher: Publisher3
Number of pages in the book: 300
Price: 3000.0
Year of publishing: 2020
```

```
Book ID: 345
Author: Author3
Publisher: Publisher3
Number of pages in the book: 300
Price: 3000.0
Year of publishing: 2020
Mention the author's name whose book details need to be dispalyed
Author2
Book details:
Title: Title2
Book ID: 234
Publisher: Publisher2
Number of pages in the book: 200
Price: 2000.0
Year of publishing: 2019
Book title of the most expensive book: Title3
Count of the books published in the year 2020: 1
Book details of the book with the least number of pages:
Title: Title1
Book ID: 123
Author: Author1
Publisher: Publisher1
Number of pages in the book: 100
Price: 1000.0
Year of publishing: 2018

C:\Users\Adithi\Desktop\java_prgs>
```