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Week-10

FILES

Q1.

```
import java.io.File;
import java.io.IOException;

public class Q1 {
public static void main(String[] args) {
try{
File myObj = new File("Files/test1.txt");
myObj.createNewFile();
System.out.println("File Exists : "+myObj.exists());
System.out.println("Is Directory ? : "+myObj.isDirectory());
System.out.println("Is File ? : "+myObj.isFile());
System.out.println("File Name : "+myObj.getName());
System.out.println("File Absolute Path : "+myObj.getAbsolutePath());
}
catch(IOException e){
System.out.println("Error Occured : "+e);
}
}
}
```

Output :

```
piratepanda@SastaPC:~/Documents/javalab/week10/Q1$ java Q1.java
File Created.
File Exists : true
Is Directory ? : false
Is File ? : true
File Name : test1.txt
File Absolute Path : /home/piratepanda/Documents/javalab/week10/Q1/Files/test1.txt
piratepanda@SastaPC:~/Documents/javalab/week10/Q1$
```

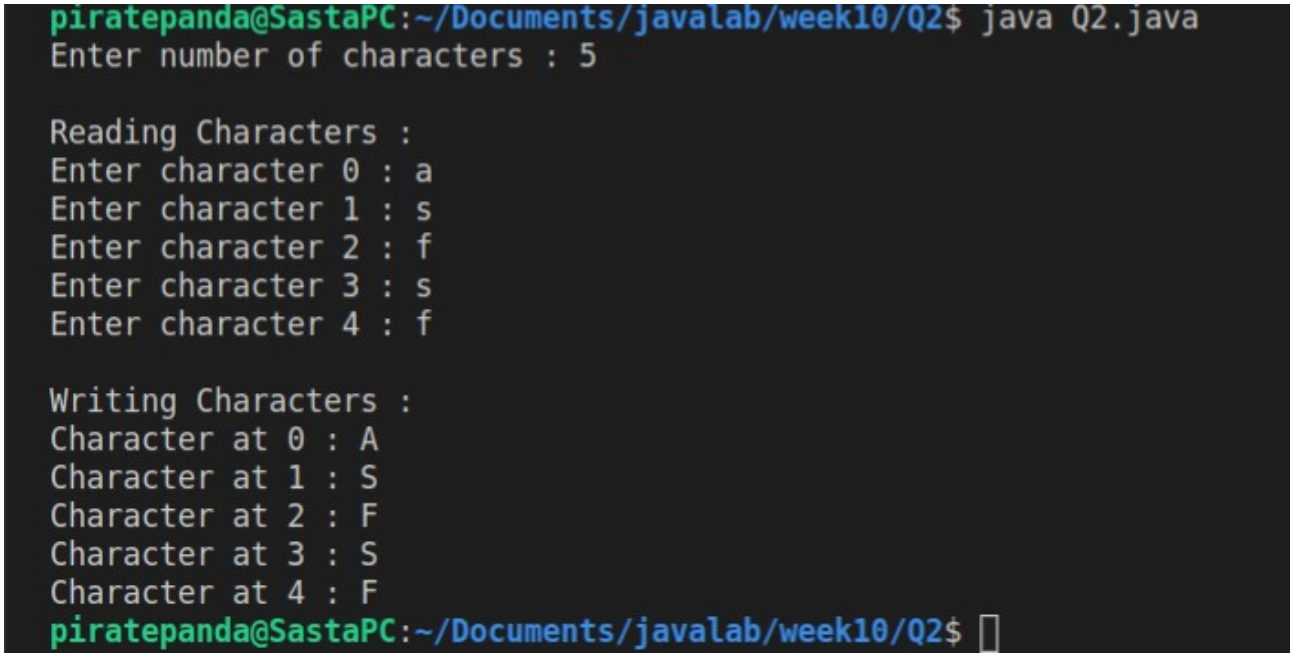
.

Q2.

```
import java.io.*;
import java.util.Scanner;

public class Q2 {
public static void main(String[] args) {
int n, i, j;
```

```
j = 0;
char c;
Scanner in = new Scanner(System.in);
System.out.print("Enter number of characters : ");
n = in.nextInt();
try {
File obj1 = new File("Files/test2.txt");
obj1.createNewFile();
System.out.println("\nReading Characters : ");
FileWriter obj2 = new FileWriter("Files/test2.txt");
for (i = 0; i < n; i++) {
System.out.print("Enter character " + i + " : ");
c = in.next().charAt(0);
obj2.append(c);
}
obj2.close();
System.out.println("\nWriting Characters : ");
FileReader obj3 = new FileReader("Files/test2.txt");
while ((i = obj3.read()) != -1) {
System.out.println("Character at " + j + " : " + Character.toUpperCase((char) i));
j++;
}
obj3.close();
} catch (IOException e) {
System.out.println(e);
}
}
}
```

Output :



.

Q3.

```
import java.io.*;
import java.util.Scanner;
class InvalidNumber extends Exception{
InvalidNumber(String s){
super(s);
}
}
public class Q3{
static void validate(int n) throws InvalidNumber{
if(n!=101&&n!=105&&n!=108&&n!=115&&n!=125)
throw new InvalidNumber("Item Number not valid.");
}
public static void main(String[] args) {
Scanner in = new Scanner(System.in);
try{
File newFile = new File("Files/test3.txt");
newFile.createNewFile();
int n,i;
FileWriter obj = new FileWriter("Files/test3.txt");
obj.write("Item-Number Price\n");
double d;
for(i=0;i<5;i++){
System.out.print("Item Number : ");
n = in.nextInt();
validate(n);
```

```
System.out.print("Price : ");
d = in.nextDouble();
obj.write(n+" "+d+"\n");
}
obj.close();
}
catch(InvalidNumber e){
System.out.println(e);
}
catch(IOException s){
System.out.println(s);
}
}
}
```

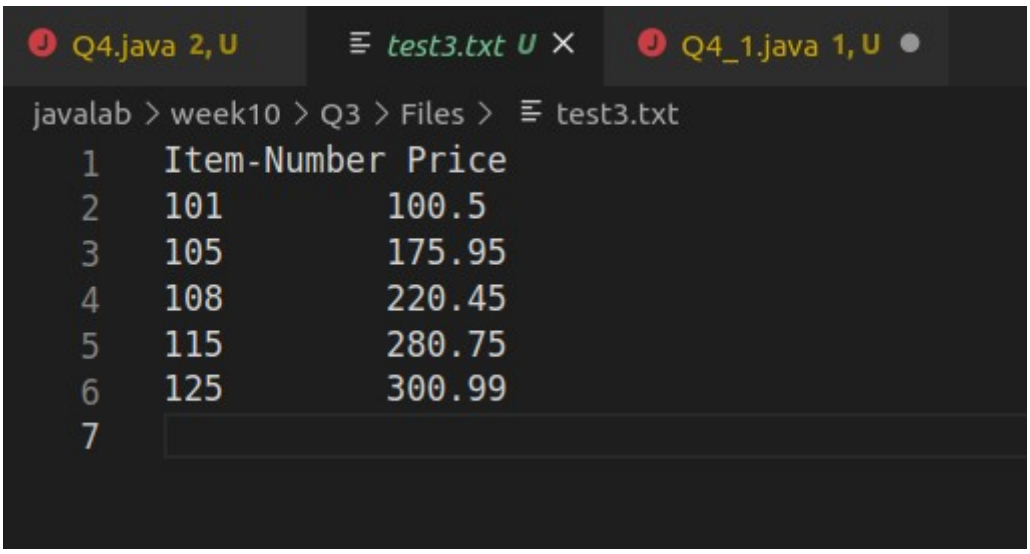
Output :

```
piratepanda@SastaPC:~/Documents/javalab/week10/Q4$ javac Q4.java
piratepanda@SastaPC:~/Documents/javalab/week10/Q4$ java Q4
Item Number : 1
InvalidNumber: Item Number not valid.
```

.

```
piratepanda@SastaPC:~/Documents/javalab/week10/Q4$ javac Q4.java
piratepanda@SastaPC:~/Documents/javalab/week10/Q4$ java Q4
Item Number : 101
Price : 100.50
Item Number : 105
Price : 175.95
Item Number : 108
Price : 220.45
Item Number : 115
Price : 280.75
Item Number : 125
Price : 300.99
piratepanda@SastaPC:~/Documents/javalab/week10/Q4$
```

.

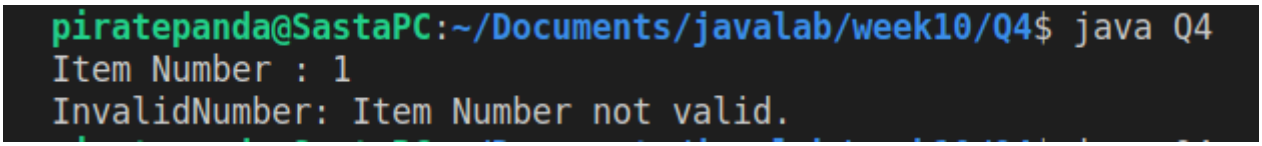


Q4.

```
import java.io.*;
import java.util.Scanner;

class InvalidNumber extends Exception {
InvalidNumber(String s) {
super(s);
}
}

class Record implements Serializable{
private int n;
private double d;
Record(int n,double d){
this.n = n;
this.d = d;
}
@Override
public String toString(){
return "Item Number : "+n+" Price : "+d+"\n";
}
}

public class Q4 {
static void validate(int n) throws InvalidNumber {
if (n != 101 && n != 105 && n != 108 && n != 115 && n != 125)
throw new InvalidNumber("Item Number not valid.");
```

```
}

public static void main(String[] args) {
Scanner in = new Scanner(System.in);
try {
File newFile = new File("Files/test4.txt");
newFile.createNewFile();
FileOutputStream f = new FileOutputStream(new File("Files/test4.txt"));
ObjectOutputStream o = new ObjectOutputStream(f);
int n, i;
double d;
Record[] obj = new Record[5];
for (i = 0; i < 5; i++) {
System.out.print("Item Number : ");
n = in.nextInt();
validate(n);
System.out.print("Price : ");
d = in.nextDouble();
obj[i] = new Record(n,d);
o.writeObject(obj[i]);
}
o.close();
f.close();
} catch (InvalidNumber e) {
System.out.println(e);
} catch (IOException s) {
System.out.println(s);
}
}
}
```

Output :



.

```
piratepanda@SastaPC:~/Documents/javalab/week10/Q4$ java Q4
Item Number : 101
Price : 100.50
Item Number : 105
Price : 175.95
Item Number : 108
Price : 220.45
Item Number : 115
Price : 280.75
Item Number : 125
Price : 300.99
piratepanda@SastaPC:~/Documents/javalab/week10/Q4$
```

.

Q5.

```
import java.io.*;

class Record implements Serializable {
private int n;
private double d;

Record(int n, double d) {
this.n = n;
this.d = d;
}

@Override
public String toString() {
return "Item Number : " + n + " Price : " + d + "\n";
}
}

public class Q4_1 {
public static void main(String[] args) {
try {
int i;
FileInputStream fi = new FileInputStream(new File("Files/test4.txt"));
ObjectInputStream oi = new ObjectInputStream(fi);
Record[] obj = new Record[5];
for (i = 0; i < 5; i++) {
try{
obj[i] = (Record) oi.readObject();
System.out.println(obj[i].toString());
}
```

```
catch(ClassNotFoundException e){
System.out.println(e);
}
}
oi.close();
fi.close();
} catch (IOException e) {
System.out.println(e);
}

}
}
```

Output :