1.Create an arraylist of user-defined data type Book. it should have:-

i)Name of the Book ii)Author of the book

iii)year of publication of the book

iV)number of copies sold. sort the array list based on the year of publication.

//code

import java.util.ArrayList;

import java.util.Collections;

import java.util.Comparator;

class Pbook{

private String name,author;

private Integer cpy,year;

public Pbook(String name,String author,Integer cpy, Integer year) {

this.name=name;

this.author=author;

this.cpy=cpy; this.year=year; }

public Integer getYear() {

return year; }

@Override

public String toString() {

return " date="+year+", name="+name+", author="+author+", cpy="+cpy+"\n"; }

}

public class SBA2\_1 {

public static void main(String[] args) {

ArrayList bk=new ArrayList();

bk.add(new Pbook("wings of fire","APJ ABDUL kALAM",400,2000));

bk.add(new Pbook("an i deniel","ashlin",120,1997));

bk.add(new Pbook("Tw States","Chethan Bhagat",500,2003));

bk.add(new Pbook("The Alchemist","Paulo Coelho",1500,1988));

System.out.println(" beforesorting:\n"+bk); bk.sort((source,target) -> {return (source.getYear() - target.getYear());});

bk.sort(Comparator.comparingInt(Pbook::getYear)); System.out.println(bk); }

}

2.Write a program to create, write and read from a file.

//code

import java.io.File;

import java.io.IOException;

import java.io.PrintWriter;

import java.io.FileReader;

import java.io.\*;

public class SBA2\_2 {

public static void main(String[] args) {

try {

File file=new File("SBA2\_2.txt");

if(!file.exists()) {

file.createNewFile(); } //content for file

PrintWriter pw= new PrintWriter(file);

pw.println("'this is the content'");

pw.println("file exists");

pw.close();

System.out.println("file created and adding content = Done"); System.out.println();

System.out.println("\*\*\*\*Reading from the file\*\*\*\*");

try{ FileReader fr = new FileReader("SBA2\_2.txt" );

int i;

while ((i = fr.read()) != -1)

System.out.print((char)i); }

catch (IOException e) {

e.printStackTrace(); }

}

catch (IOException e) { e.printStackTrace();

}

}

}

//output

3.Write a program to get the information about the file.

//code

import java.io.\*;

public class SBA2\_3 {

public static void main(String[] args) {

File f=new File("SBA2\_2.txt");

if(f.exists()) {

System.out.println("File Name :"+f.getName());

System.out.println("File Path :"+f.getAbsolutePath());

System.out.println("File Free Space :"+f.getFreeSpace()); System.out.println("File Writable :"+f.canRead());

System.out.println("File Readable :"+f.canWrite());

System.out.println("File useSpace :"+f.getUsableSpace()); System.out.println("File TotalSpace :"+f.getTotalSpace()); }

else { System.out.println("file doesn exists");

}

}

}

//output

4.Write a program Implement the filereader until the file ending character is “-1” and print all the data of the file.

//code

import java.io.\*;

import java.io.FileReader;

public class SBA2\_4 {

public static void main(String[] args) throws IOException {

try {

FileReader file=new FileReader("SBA2\_2.txt");

int data=file.read();

while(data!=-1) {

System.out.print((char)data); data=file.read(); }

file.close(); }

catch (FileNotFoundException e) {

e.printStackTrace(); }

}

}

//output