**Phase #1 Java Program:**

**package** VirtualKey;

**import** java.util.Scanner;

**import** java.util.Collections;

**import** java.io. File;

**import** java.io. IOException;

**import** java.util.Arrays;

**import** java.util.List;

**public** **class** VirtualKey {

**public** **static** **void** display() {

System.***out***.println("Choose one of the below options...");

System.***out***.println("1.Display files in ascending order\n2.File Operations \n3.Exit Application");

}

**public** **static** **void** sort() {

File f=**new** File("C:\\Files");

**if**(f.isDirectory()) {

List<String> listFile =Arrays.*asList*(f.list());

Collections.*sort*(listFile);

**for**(String k:listFile) {

System.***out***.println(k);

}

}

**else** {

System.***out***.println("No Files Found");

}VirtualKey.*display*();

}

**public** **static** **void** operations() {

System.***out***.println("Choose one of the below operations");

System.***out***.println("1. Create a new File\n2. Delete existing File \n3. Search for a File \n4. Exit");

Scanner sc1 = **new** Scanner (System.***in***);

**try** {

**int** n1=sc1.nextInt();

**switch**(n1) {

**case** 1: System.***out***.println("Creating a new File");

*createfile*();

**break**;

**case** 2: System.***out***.println("Delete existing File");

*deletefile*();

**break**;

**case** 3: System.***out***.println("Search for a File");

*searchfile*();

**break**;

**case** 4: System.***out***.println("Exit");

**break**;

}

}**catch**(Exception e) {

System.***out***.println("Invalid number");

VirtualKey.*operations*();

}

}

**private** **static** **void** searchfile() {

System.***out***.println("Enter the file name that you want to search...");

Scanner s=**new** Scanner(System.***in***);

String s1=s.nextLine();

File f1=**new** File("C:\\Files//"+s);

**if**(f1.exists()) {

System.***out***.println("File Exists in the location"+f1.getAbsolutePath());

VirtualKey.*operations*();

}

**else** {

System.***out***.println("File does not exist in the location");

VirtualKey.*operations*();

}

}

**private** **static** **void** deletefile() {

System.***out***.println("Enter the file name that you want to delete... ");

Scanner k=**new** Scanner(System.***in***);

String s2=k.nextLine();

File f2=**new** File("C:\\Files//"+s2);

**if**(f2.delete()) {

System.***out***.println(f2.getName() +" File deleted Successfully");

VirtualKey.*operations*();

}

**else** {

System.***out***.println("File does not exist");

VirtualKey.*operations*();

}

}

**private** **static** **void** createfile() **throws** IOException {

System.***out***.println("Enter the file that you want to create");

Scanner l=**new** Scanner(System.***in***);

String s3=l.nextLine();

File f3=**new** File("C:\\Files//"+s3);

**try** {

**if**(f3.createNewFile()) {

System.***out***.println(f3.getName() +" File created Successfully");

VirtualKey.*operations*();

}

**else** {

System.***out***.println("File already created "+f3+" in this location");

VirtualKey.*operations*();

}

} **catch**(Exception e) {

System.***out***.println(e);

}

}

**public** **static** **void** main(String[] args) {

System.***out***.println("Virtual Key for your Repository...");

Scanner sc=**new** Scanner(System.***in***);

VirtualKey.*display*();

**while**(**true**) {

**try** {

**int** n=sc.nextInt();

**switch**(n) {

**case** 1:System.***out***.println("The Files are sorted in ascending order..");

*sort*();

**break**;

**case** 2:*operations*();

**break**;

**case** 3:System.***out***.println("Exit Application");

System.*exit*(n);

**break**;

**default**: System.***out***.println("Invalid number..");

**break**;

}

}**catch**(Exception e) {

System.***out***.println("Enter valid number");

VirtualKey.*main*(args);

}

}

}

}