OOPS Lab 10

DATE: 04-10-2024

q1)

Aim: Write a java program using built-in exception to check if the file is found at a particular location

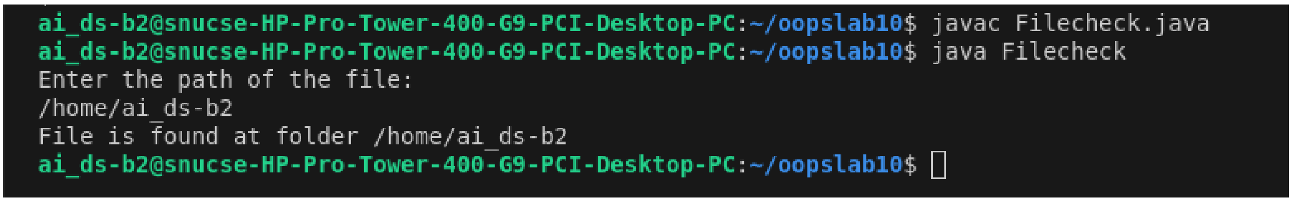
Algorithm:

- **Input**: Prompt the user to enter a file path.
- **Create File Object**: Instantiate a `File` object using the provided file path.
- **Check Existence**: Use the `exists()` method of the `File` object to check if the file exists.
- **Output Result**: Print the appropriate message based on the file's existence.
- **Handle Exceptions**: If a `SecurityException` occurs, inform the user about access denial.
- **Close Scanner**: Finally, close the scanner resource.

Code:

```
import java.util.*;
public class Filecheck
{
    public static void main(String[] args)
    {
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter the path of the file:");
        String filepath = scan.nextLine();
        File file = new File(filepath);

        try
        {
            if(file.exists())
            {
                System.out.println("File is found at folder "+file.getAbsolutePath());
            }
            else
            {
                System.out.println("File is not found at folder "+file.getAbsolutePath());
            }
        }
        catch(SecurityException e)
        {
            System.out.println("Security error occured "+e.getLocalizedMessage());
        }
        finally
        {
            scan.close();
        }
    }
```

}
OUTPUT:



```
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ javac Filecheck.java
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ java Filecheck
Enter the path of the file:
/home/ai_ds-b2
File is found at folder /home/ai_ds-b2
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ 
```

q2)

Aim: To Write a java program to get the last modification date and time of a file

Algorithm:

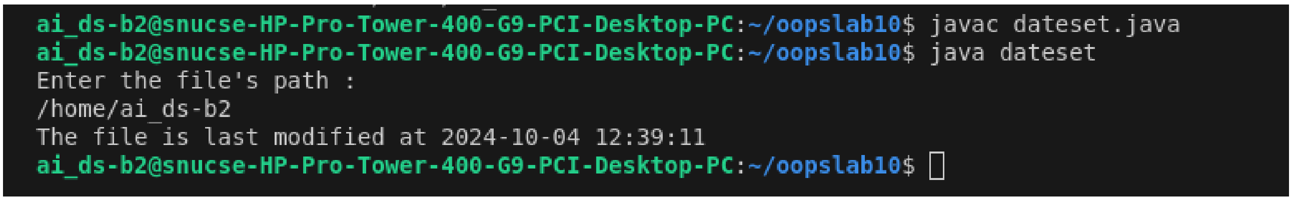
- Prompt the user to enter a file path.
- Create a File object using the provided file path.
- Check if the file exists.
- If it exists, get the last modified time in milliseconds and convert it to a Date object.
- Format the date to a readable string and display it.
- If the file does not exist, inform the user that the file was not found.

CODE:

```
import java.util.*;
import java.io.*;
import java.text.SimpleDateFormat;
public class dateset
{
   public static void main(String[] args) {
       try
       {
          Scanner scan = new Scanner(System.in);
          System.out.println("Enter the file's path :");
          String filepath = scan.nextLine();
```

```
            File file = new File(filepath);
            if(file.exists())
            {
                long lastsaved = file.lastModified();
                Date date = new Date(lastsaved);

                SimpleDateFormat format = new SimpleDateFormat("yyyy-MM-dd HH:mm:ss");
                String Dateformat = format.format(date);

                System.out.println("The file is last modified at "+Dateformat);
            }
            else
            {
                System.out.println("The given file doesn't exist");
            }

        }
        catch(SecurityException e)
        {
            System.out.println("Security exception occured:"+ e.getLocalizedMessage());
        }
    }
}
}
```

OUTPUT:



```
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ javac dateset.java
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ java dateset
Enter the file's path :
/home/ai_ds-b2
The file is last modified at 2024-10-04 12:39:11
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ 
```

q3)

Aim: To Write a java program to rename an existing file.

Algorithm:

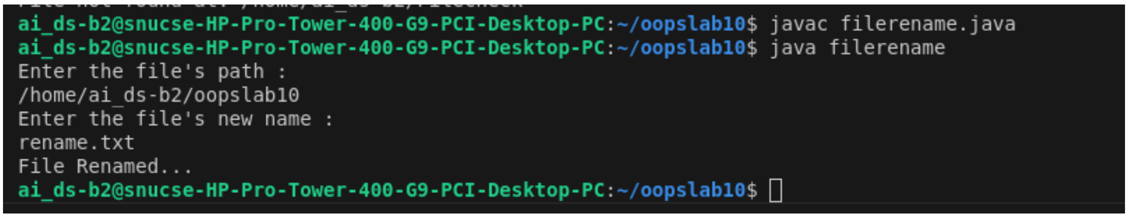
- Prompt the user to enter the file's path and read it.
- Create a `File` object for the specified path.
- Prompt the user to enter the new file name and read it.
- Create a new `File` object using the original file's parent directory and the new name.

- Check if the original file exists; if it does, attempt to rename it.
- Print a success message if renamed, or an error message if renaming fails or if the file was not found.
-

CODE:

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

public class filerename
{
   public static void main(String[] args)
   {
      Scanner scan = new Scanner(System.in)    ;
      System.out.println("Enter the file's path :");
      String filepath = scan.nextLine();
      File file = new File(filepath);
      System.out.println("Enter the file's new name :");
      String newfilename = scan.nextLine();
      File newnamedfile= new File(file.getParent(),newfilename);

      if(file.exists())
      {
         if(file.renameTo(newnamedfile))
         {
            System.out.println("File Renamed...");
         }
         else{
            System.out.println("error occured while renaming the file");
         }
      }

      else {
         System.out.println("File not found at: " + file.getAbsolutePath());
      }

      scan.close();
   }
}
```

OUTPUT:



```
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ javac filerename.java
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ java filerename
Enter the file's path :
/home/ai_ds-b2/oopslab10
Enter the file's new name :
rename.txt
File Renamed...
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ 
```

q4)

Aim: To Write a java program to create directory or folder in particular drive

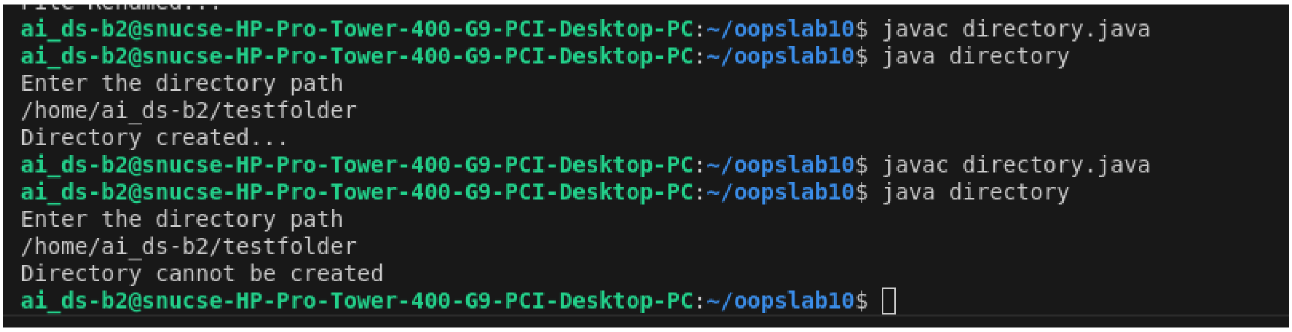
Algorithm:

- Prompt the user to enter the directory path where the new folder should be created.
- Create a File object using the provided directory path.
- Attempt to create the directory using the mkdir() method.
- If the directory is created successfully, print a success message with the directory's absolute path.
- If directory creation fails, print an error message indicating the failure reason.
- Close the scanner to release resources.

CODE:

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

public class directory
{
   public static void main(String[] args) {

      Scanner scan = new Scanner(System.in);
      System.out.println("Enter the directory path");
      String dir = scan.nextLine();
      File directory = new File(dir);

      if(directory.mkdir())
      {
         System.out.println("Directory created...");
      }
      else
      {
         System.out.println("Directory cannot be created");
      }

      scan.close();

   }


}
```

OUTPUT:



```
File Renamed!!!
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ javac directory.java
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ java directory
Enter the directory path
/home/ai_ds-b2/testfolder
Directory created...
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ javac directory.java
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ java directory
Enter the directory path
/home/ai_ds-b2/testfolder
Directory cannot be created
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ 
```

q5)

Aim: Write a java program to check whether a file can be read or not

Algorithm:

Prompt the user to enter the file path to check its readability.

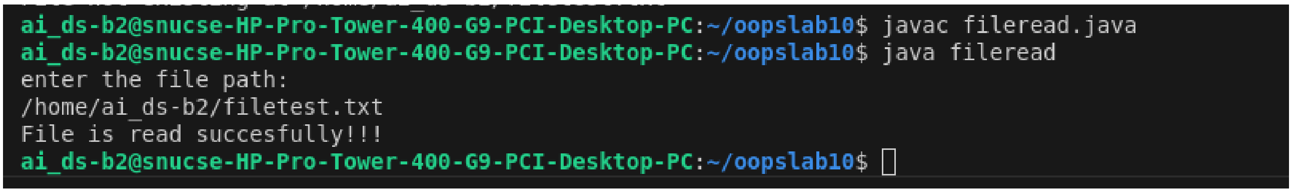
- Create a `File` object using the provided file path.
- Check if the file exists.
- If the file exists, use the `canRead()` method to determine if it can be read.
- Print a message indicating whether the file can be read or not.
- If the file does not exist, inform the user that the file was not found.

CODE:

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

public class fileread
{
   public static void main(String[] args)
   {
      Scanner scan = new Scanner(System.in);
      System.out.println("enter the file path: ");
      String path = scan.nextLine();
      File file = new File(path);
      if(file.exists())
      {
         if(file.canRead())
         {
            System.out.println("File is read succesfully!!!");
         }
         else
         {
            System.out.println("File cannot be read...");
         }
      }
```

```
        else
        {
            System.out.println("File not existing at "+ file.getAbsolutePath());
        }
        scan.close();
    }
}
```

OUTPUT:



```
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ javac fileread.java
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ java fileread
enter the file path:
/home/ai_ds-b2/filetest.txt
File is read succesfully!!!
ai_ds-b2@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/oopslab10$ 
```