1. Program to calculate simple interest using java11 local variable.

public class SI {

public static void main(String[] args)

{

FuncInterobj = (var p, var t, var r) ->p\*t\*r/100;

System.out.println ("Result:" + obj.operation(50,2,2));

}

}

interface FuncInter

{

int operation(int p, int t, double r);

}

Output:

Result: 2.0

2. Java11 supports var keyword for variable declarations. List the scenarios where var keyword cannot be used for such variable declarations.

import java.io.\*;

class Demo

public static void main(String[] args)

{

// declaration without

// initialization

var variable;

// This is also not valid

var variable = null;

}

}

Output

prog.java:13: error: cannot infer type for local variable variable var variable;

^

(cannot use 'var' on variable without initializer)

prog.java:16: error: cannot infer type for local variable variable var variable = null;

^

(variable initializer is 'null')

2 errors

3. Create an array list from the given string.

import java.lang.reflect.Array;

import java.util.ArrayList;

import java.util.Arrays;

public class strings {

public static void main(String[] args) {

ArrayList<String> list = new ArrayList<>();

list.add("A quick");

list.add("brown");

list.add("fox jumps");

list.add("over the");

list.add("lazy dog");

//System.out.println(list);

String[] arr2=list.toArray(String[]::new);

System.out.println(Arrays.toString(arr2));

}

}

Output:

[A quick, brown, fox jumps, over the, lazy dog]

1. Read the data from the student.txt file

import java.io.BufferedReader;

import java.io.File;

import java.io.FileInputStream;

import java.io.FileReader;

import java.io.IOException;

import java.nio.file.Files;

import java.nio.file.Path;

import java.util.Scanner;

public class file1 {

public static void main(String[] args)

{

var path="C:\\StudentList.txt";

try {

String data=Files.readString(Path.of(path));

System.out.println(data);

int count =0;

Scanner fileReader = new Scanner(new FileInputStream(path));

int wordCount = 0;

while(fileReader.hasNext()){

fileReader.next();

wordCount++;

}

fileReader.close();

System.out.println("Number of students in the file is: " + wordCount);

}

catch (IOException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

}

Output:

John

Mathew

Sheeren

George

Peeter

Steven

Michel

Andrew

Number of students in the file is: 8

5. Write a program with menu to accept the price of certain items and display their total.

import java.io.IOException;

import java.nio.file.Files;

import java.nio.file.Path;

import java.nio.file.StandardOpenOption;

import java.util.Scanner;

public class Writetofile {

public static void main(String[] args) {

// TODO Auto-generated method stub

var firstfile = "C:\\Users\\hello\\prices.txt";

var secondfile = "C:\\Users\\hello\\total.txt";

int val =1,pr,total=0;

String c="Yes";

try {

Scanner sc = new Scanner(System.in);

char ch;

do {

System.out.println("\n \*\*\*Menu\*\*\*");

System.out.println("a. Insert new price \n b. View purchase Total \n c. Exit ");

System.out.println("Enter your choice: ");

ch = sc.next().charAt(0);

switch (ch) {

case 'a': do {

if(c.equals("Yes")) {

System.out.println("\nInsert "+val+" item price");

pr=sc.nextInt();

total=total+pr;

Files.writeString(Path.of(firstfile), String.valueOf(pr),StandardOpenOption.APPEND);

System.out.println("---Price has been saved to the file---");

System.out.println("\*\*\*Do u want to enter price for more items?(Yes/No)\*\*\*");

c = sc.next();

val = val+1;

}

else

{

break;

}

}

while(c!="Yes");

break;

case 'b':

Files.writeString(Path.of(secondfile), String.valueOf(total),StandardOpenOption.APPEND);

String totprice = Files.readString(Path.of(secondfile));

System.out.println(totprice);

break;

case 'c':

System.out.println("See you soon!!");

}

} while (ch != (int)'c');

}

catch(IOException e) {

e.printStackTrace();

}

}

}

Output

\*\*\*Menu\*\*\*

a. Insert new price

b. View purchase Total

c. Exit

Enter your choice:

a

Insert 1 item price

100

---Price has been saved to the file---

\*\*\*Do u want to enter price for more items?(Yes/No)\*\*\*

Yes

Insert 2 item price

200

---Price has been saved to the file---

\*\*\*Do u want to enter price for more items?(Yes/No)\*\*\*

No

\*\*\*Menu\*\*\*

a. Insert new price

b. View purchase Total

c. Exit

Enter your choice:

b

Total price of all items is: 300

\*\*\*Menu\*\*\*

a. Insert new price

b. View purchase Total

c. Exit

Enter your choice:

c

See you soon!!

6. Write code using HTTP Client AP

import java.io.IOException;

import java.net.URI;

import java.net.http.HttpClient;

import java.net.http.HttpHeaders;

import java.net.http.HttpRequest;

import java.net.http.HttpResponse;

import java.time.Duration;

public class HttpClientSynchronous {

private static final HttpClienthttpClient = HttpClient.newBuilder()

.version(HttpClient.Version.HTTP\_1\_1)

.connectTimeout(Duration.ofSeconds(10))

.build();

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

HttpRequest request = HttpRequest.newBuilder()

.GET()

.uri(URI.create("https://httpbin.org/get"))

.setHeader("User-Agent", "Java 11 HttpClient Bot") // add request header

.build();

HttpResponse<String> response = httpClient.send(request, HttpResponse.BodyHandlers.ofString());

// print response headers

HttpHeaders headers = response.headers();

headers.map().forEach((k, v) ->System.out.println(k + ":" + v));

// print status code

System.out.println(response.statusCode());

// print response body

System.out.println(response.body());

}

}

Output:

access-control-allow-credentials:[true]

access-control-allow-origin:[\*]

connection:[keep-alive]

content-length:[271]

content-type:[application/json]

date:[Thu, 20 Jan 2022 15:06:50 GMT]

server:[gunicorn/19.9.0]

200

{

"args": {},

"headers": {

"Content-Length": "0",

"Host": "httpbin.org",

"User-Agent": "Java 11 HttpClient Bot",

"X-Amzn-Trace-Id": "Root=1-61e97a8a-43f54c175b843c1654ca185e"

},

"origin": "150.129.88.3",

"url": "https://httpbin.org/get"

}