**TITLE PAGE**

**Course:** CS1073

**Section:** FR03B

**Lab number:** 4

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**UNB student number:** 3740572

ScholarshipAssessment.java:

/\*\*

This class is used to determine a student's scholarship eligibility.

@author Zohaib Khan 3740572

\*/

import java.util.Scanner;

public class ScholarshipAssessment {

public static void main (String[] args) {

Scanner sc = new Scanner(System.in);

int scholarship = 500;

System.out.println("Enter the number of credit hours completed in

the last year:");

int credits = sc.nextInt();

while (credits < 0) {

System.out.println("Credit hours must be non-negative.");

System.out.println("Enter the number of credit hours completed in

the last year:");

credits = sc.nextInt();

}

if (credits < 24) {

System.out.println("Have you participated in a university co-op

program in the last year (yes or no)?");

String coop = sc.next();

while (!coop.equals("yes") && !coop.equals("no")) {

System.out.println("Enter yes or no:");

coop = sc.next();

}

if (coop.equals("yes")) {

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

double gpa = sc.nextDouble();

while (gpa < 0) {

System.out.println("Invalid GPA. Enter a non-negative

GPA:");

gpa = sc.nextDouble();

}

if (gpa >= 2.7) {

if (gpa >= 3 && gpa < 3.7) {

scholarship = scholarship + 200;

}

if (gpa >= 3.7) {

scholarship = scholarship + 400;

}

System.out.println("Enter the number of official university

clubs, societies, or teams in which you

participated last year:");

int clubs = sc.nextInt();

while (clubs < 0) {

System.out.println("Invalid number. Enter a non-negative

number");

clubs = sc.nextInt();

}

if (clubs >= 3) {

scholarship = scholarship + 100;

}

System.out.println("Do you have demonstrated financial need

(yes or no)?");

String need = sc.next();

while (!need.equals("yes") && !need.equals("no")) {

System.out.println("Enter yes or no:");

need = sc.next();

}

if (need.equals("yes")) {

scholarship = scholarship \* 2;

}

System.out.println("You are eligible for a scholarship of

$" + scholarship);

}

else {

System.out.println("Sorry, you are not eligible for a

scholarship.");

}

}

else {

System.out.println("Sorry, you are not eligible for a

scholarship.");

}

}

else {

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

double gpa = sc.nextDouble();

while (gpa < 0) {

System.out.println("Invalid GPA. Enter a non-negative GPA:");

gpa = sc.nextDouble();

}

if (gpa >= 2.7) {

if (gpa >= 3 && gpa < 3.7) {

scholarship = scholarship + 200;

}

if (gpa >= 3.7) {

scholarship = scholarship + 400;

}

System.out.println("Enter the number of official university

clubs, societies, or teams in which you

participated last year:");

int clubs = sc.nextInt();

while (clubs < 0) {

System.out.println("Invalid number. Enter a non-negative

number");

clubs = sc.nextInt();

}

if (clubs >= 3) {

scholarship = scholarship + 100;

}

System.out.println("Do you have demonstrated financial need

(yes or no)?");

String need = sc.next();

while (!need.equals("yes") && !need.equals("no")) {

System.out.println("Enter yes or no:");

need = sc.next();

}

if (need.equals("yes")) {

scholarship = scholarship \* 2;

}

System.out.println("You are eligible for a scholarship of $" +

scholarship);

}

else {

System.out.println("Sorry, you are not eligible for a

scholarship.");

}

}

}

}

Q1Output:

Text

Description automatically generated

SleepTracker.java:

/\*\*

This class generates a sleep tracking report.

@author Zohaib Khan 3740572

\*/

import java.util.Scanner;

public class SleepTracker {

public static void main (String[] args) {

int numNights = 0;

double idealTime = 0.00;

int belowIdealTime = 0;

double min = 10000.00;

double avg = 0.00;

double total = 0.00;

Scanner sc = new Scanner(System.in);

System.out.println("Please enter your optimal sleep time (in

hours):");

idealTime = sc.nextDouble();

while (idealTime < 0) {

System.out.println("Optimal sleep time must be non-

negative.");

System.out.println("Please enter your optimal sleep time (in

hours):");

idealTime = sc.nextDouble();

}

System.out.println("Next, enter your recorded sleep history

values (in hours).");

System.out.println("Enter a negative number when done:");

double sleepRecord = sc.nextDouble();

while (sleepRecord >= 0) {

numNights = numNights + 1;

total = total + sleepRecord;

if (sleepRecord < min) {

min = sleepRecord;

}

if (sleepRecord < idealTime) {

belowIdealTime = belowIdealTime + 1;

}

sleepRecord = sc.nextDouble();

}

avg = total / numNights;

System.out.println("Your sleep report:\n"

+ numNights + " nights total\n"

+ belowIdealTime + " nights below your optimal

sleep time\n"

+ "Lowest sleep time: " + min + "\n"

+ "Average sleep time: " + avg);

}

}

Q2Output:

Text

Description automatically generated