



FEU INSTITUTE OF TECHNOLOGY

COLLEGE OF COMPUTER STUDIES AND MULTIMEDIA ARTS

CCS0003L

(COMPUTER PROGRAMMING 1)

TECHNICAL ASSESSMENT

1

BASIC AVERAGE CALCULATOR AND STUDENT INFORMATION SYSTEM

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Professor:	Ms. Hazel Patilano
Date:	9/18/2025

I. PROGRAM OUTCOME/S (PO) ADDRESSED BY THE LABORATORY EXERCISE

- Apply knowledge through the use of current techniques and tools necessary for the IT profession. [PO: I]

II. COURSE LEARNING OUTCOME/S (CLO) ADDRESSED BY THE LABORATORY EXERCISE

- Solve computing problems using design tools that meets specific requirements. [CLO: 1]

III. INTENDED LEARNING OUTCOME/S (ILO) OF THE LABORATORY EXERCISE

At the end of this exercise, students must be able to:

- Familiarize an environment in creating a C++ program
- Create a simple program, compile and run it.

IV. BACKGROUND INFORMATION

C++ is one of the most widely used programming languages because of its flexibility, efficiency, and ability to support both **procedural** and **object-oriented programming**. In this activity, we focus on two key applications of C++: **numerical computation** and **data management using structures**.

1. Arrays and Average Calculation

- An **array** is a collection of elements of the same type stored in contiguous memory locations. In this assignment, arrays are used to store a fixed number of numeric inputs.
- Computing the **average** of a set of numbers requires summing all the values and dividing the total by the number of items. This is a fundamental operation in programming that practices **looping** and **arithmetic operations**.

2. Structures for Student Information

- A **structure (struct)** in C++ is a user-defined data type that groups related variables of different types under a single name. Unlike arrays, which hold only one type of data, structures can store diverse information such as names, ages, and accounts.
- In real-life applications, structures are useful in representing entities like **students, employees, products, or records**. For this task, each student's personal data (name, age, Facebook account, and section) will be stored inside a structure.

3. Input and Output

- C++ provides `cin` and `cout` for **user input and program output**, respectively. Proper handling of these is necessary, especially when mixing integer inputs with string inputs (e.g., `cin.ignore()` is needed to clear the buffer).

By combining arrays, structures, and basic I/O, this exercise simulates real-world scenarios where we need to **process numerical data** and **manage multiple sets of information**. This assignment also helps strengthen problem-solving skills, logical thinking, and familiarity with C++ syntax.

V. ASSIGNMENT ACTIVITY

ASSIGNMENT 2: Basic Average Calculator and Student Information System

Objective:

- To practice using arrays, structures, and input/output statements in C++.
- To apply the concept of storing and displaying multiple data items.

PROCEDURE:

Part 1: Average of 5 Numbers

- Write a C++ program that will ask the user to input 5 numbers.
- Compute the sum and average of the 5 numbers.
- Display the computed average.

Part 2: 5 - Student Information

- Create a structure named *Student* that will hold the following information:
 - Full Name
 - Age
 - Facebook Account
 - Section

Program Flow:

- Display a title for Part 1.
- Accept and compute the average of 5 numbers.
- Display the result.
- Display a title for Part 2.
- Accept and store the 5 students' information.
- Display all stored student details neatly.

SAMPLE OUTPUT:

OUTPUT
<pre>==== Part 1: Average of 5 Numbers ==== Enter number 1: 10 Enter number 2: 20 Enter number 3: 30 Enter number 4: 40 Enter number 5: 50 The average of the 5 numbers is: 30 ==== Part 2: Student Information ====</pre>

```

Enter details for Student 1
Full Name: Juan Dela Cruz
Age: 20
Facebook Account: fb.com/juancruz
Section: BSCS-3A

... (other students)

==== Student Information List ====
Student 1:
Full Name: Juan Dela Cruz
Age: 20
Facebook: fb.com/juancruz
Section: BSCS-3A

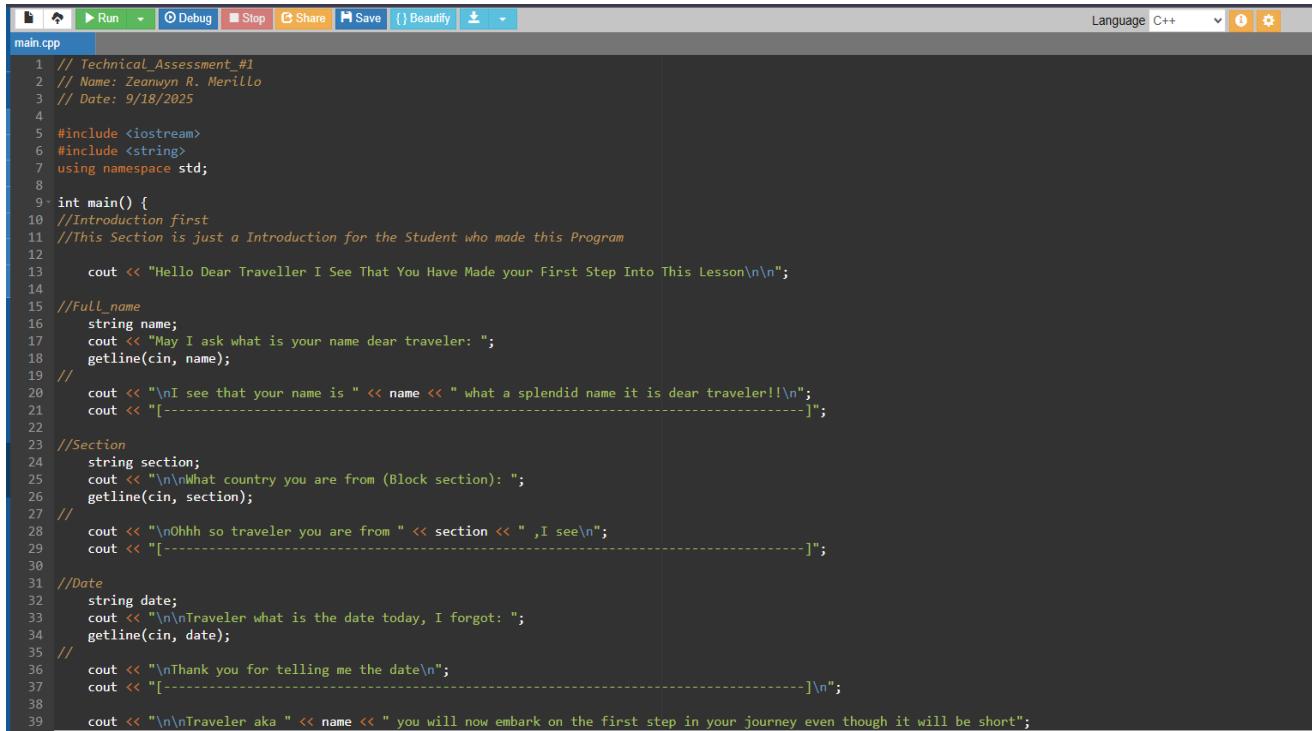
```

SUBMISSION:

Submit the following:

- Source code file (.cpp).
- Screenshot of your program while running (must include the input and output).
- Final program output in text form (copied from your console or terminal).

⚠ Note: No credit will be given without both the code and screenshot of the output.
OUTPUT/CODE SCREENSHOT:



```

main.cpp
1 // Technical_Assessment_#1
2 // Name: Zeawyn R. Merillo
3 // Date: 9/18/2025
4
5 #include <iostream>
6 #include <string>
7 using namespace std;
8
9 int main() {
10 //Introduction first
11 //This Section is just a Introduction for the Student who made this Program
12
13     cout << "Hello Dear Traveller I See That You Have Made your First Step Into This Lesson\n\n";
14
15 //Full_name
16     string name;
17     cout << "May I ask what is your name dear traveler: ";
18     getline(cin, name);
19 //
20     cout << "\nI see that your name is " << name << " what a splendid name it is dear traveler!!\n";
21     cout << "[-----]"; 
22
23 //Section
24     string section;
25     cout << "\n\nWhat country you are from (Block section): ";
26     getline(cin, section);
27 //
28     cout << "\nOhhh so traveler you are from " << section << ", I see\n";
29     cout << "[-----]"; 
30
31 //Date
32     string date;
33     cout << "\n\nTraveler what is the date today, I forgot: ";
34     getline(cin, date);
35 //
36     cout << "\nThank you for telling me the date\n";
37     cout << "[-----]\n";
38
39     cout << "\n\nTraveler aka " << name << " you will now embark on the first step in your journey even though it will be short";

```

```

39 cout << "\n\nTraveler aka " << name << " you will now embark on the first step in your journey even though it will be short";
40 cin.ignore();
41
42 //=====
43 //Part 1: Average of 5 Numbers but in Adventuring way!!!
44 cout << "\n\n===== Your First Task in Adventure: Average of Your Gold Gathered from Slaying Mobs in 5 Days =====\n";
45 cout << "-----";
46 cout << "\n\nTraveler I know you have slain a mobs along the way so why not input the golds you gain during the 5 days of you adventuring!\n\n";
47
48 //first
49 int number_one;
50 cout << "\nFirst day of slaying mobs 1: ";
51 cin >> number_one;
52
53 //second
54 int number_two;
55 cout << "\nSecond day of slaying mobs 2: ";
56 cin >> number_two;
57
58 //third
59 int number_three;
60 cout << "\nThird day of slaying mobs 3: ";
61 cin >> number_three;
62
63 //fourth
64 int number_four;
65 cout << "\nFourth day of slaying mobs 4: ";
66 cin >> number_four;
67
68 //fifth
69 int number_five;
70 cout << "\nFifth day of slaying mobs 5: ";
71 cin >> number_five;
72
73 //Formula for the Average
74 int formula = (number_one + number_two + number_three + number_four + number_five) / 5;
75
76 cout << "\nThe general average of your 5 days worth of slaying mobs is " << formula << " golds what a good amount of golds you have";
77
78 cout << "\nThe general average of your 5 days worth of slaying mobs is " << formula << " golds what a good amount of golds you have";
79 cin.ignore();
80
81 //=====
82
83 //Part 2: Student Information but in adventuring way!!!
84 cout << "\n\n===== Your Second Task in Adventure: The Recruitment Information For Your Party =====\n";
85 cout << "-----";
86 cout << "\n\nOf course when having a party you need a details first right, so why not list down the information of the members your eyes have on!!\n";
87 cout << "\nEnter Details For Your Recruit Person 1\n";
88
89 //Student_1,
90 //Variable is called stud because I want to still know it is a student
91 //But in the Output it will be called Recruit Person for creativeness
92 //Name of student
93 string stud_1;
94 cout << "\nMay I ask what is the Full Name of the Recruit Person: ";
95 getline(cin, stud_1);
96
97 //Age
98 string age_1;
99 cout << "What is the Age: ";
100 getline(cin, age_1);
101
102 //Facebook
103 string fb_1;
104 cout << "What is the Codename of the Person (Facebook Account): ";
105 getline(cin, fb_1);
106
107 //Section
108 string sect_1;
109 cout << "Where he/she came from (Block Section): ";
110 getline(cin, sect_1);
111
112 cout << "\n\nThe recruitment information indicate that the Recruit Name is " << stud_1 << " and the age of him/her is " << age_1 << " ,the codename (FB Acc) is "
113 cin.ignore();
114 //-----
115

```

```

116     cout << "[-----]\n";
117     cout << "\n\nEnter Details For Your Recruit Person 2\n";
118 //Student_2
119 //Name of student
120     string stud_2;
121     cout << "\nMay I ask what is the Full Name of the Recruit Person: ";
122     getline(cin, stud_2);
123
124 //Age
125     string age_2;
126     cout << "What is the Age: ";
127     getline(cin, age_2);
128
129 //Facebook
130     string fb_2;
131     cout << "What is the Codename of the Person (Facebook Account): ";
132     getline(cin, fb_2);
133
134 //Section
135     string sect_2;
136     cout << "Where he/she came from (Block Section): ";
137     getline(cin, sect_2);
138
139     cout << "\n\nThe recruitment information indicate that the Recruit Name is " << stud_2 << " and the age of him/her is is " << age_2 << " ,the codename (FB Acc) is "
140     cin.ignore();
141 //-----
142     cout << "[-----]\n";
143     cout << "\n\nEnter Details For Your Recruit Person 3\n";
144 //Student_3
145 //Name of student
146     string stud_3;
147     cout << "\nMay I ask what is the Full Name of the Recruit Person: ";
148     getline(cin, stud_3);
149
150 //Age
151     string age_3;
152     cout << "What is the Age: ";
153     getline(cin, age_3);
154

```

```

156 //Facebook
157     string fb_3;
158     cout << "What is the Codename of the Person (Facebook Account): ";
159     getline(cin, fb_3);
160
161 //Section
162     string sect_3;
163     cout << "Where he/she came from (Block Section): ";
164     getline(cin, sect_3);
165
166     cout << "\n\nThe recruitment information indicate that the Recruit Name is " << stud_3 << " and the age of him/her is " << age_3 << " ,the codename (FB Acc) is "
167     cin.ignore();
168 //-----
169     cout << "[-----]\n";
170     cout << "\n\nEnter Details For Your Recruit Person 4\n";
171 //Student_4
172 //Name of student
173     string stud_4;
174     cout << "\nMay I ask what is the Full Name of the Recruit Person: ";
175     getline(cin, stud_4);
176
177 //Age
178     string age_4;
179     cout << "What is the Age: ";
180     getline(cin, age_4);
181
182 //Facebook
183     string fb_4;
184     cout << "What is the Codename of the Person (Facebook Account): ";
185     getline(cin, fb_4);
186
187 //Section
188     string sect_4;
189     cout << "Where he/she came from (Block Section): ";
190     getline(cin, sect_4);
191
192     cout << "\n\nThe recruitment information indicate that the Recruit Name is " << stud_4 << " and the age of him/her is " << age_4 << " ,the codename (FB Acc) is "
193     cin.ignore();
194

```

```

195 //-----
196     cout << "[-----] \n";
197     cout << "\n\nEnter Details For Your Recruit Person 5\n";
198 //Student_5
199 //Name of student
200 string stud_5;
201 cout << "\nMay I ask what is the Full Name of the Recruit Person: ";
202 getline(cin, stud_5);
203
204 //Age
205 string age_5;
206 cout << "What is the Age: ";
207 getline(cin, age_5);
208
209 //Facebook
210 string fb_5;
211 cout << "What is the Codename of the Person (Facebook Account): ";
212 getline(cin, fb_5);
213
214 //Section
215 string sect_5;
216 cout << "Where he/she came from (Block Section): ";
217 getline(cin, sect_5);
218
219 cout << "\n\nThe recruitment information indicate that the Recruit Name is " << stud_5 << " and the age of him/her is " << age_5 << " ,the codename (FB Acc) " <<
220 cin.ignore();
221 //-----
222
223
224
225 // =====
226 //Just an Extra thingy
227 cout << "\n===== The Beginnings End =====\n";
228 cout << "\n\nAre you done with your adventure?\n\n";
229
230 string identify;
231 cout << "Enter you Confirmation Traveler: ";
232 getline(cin, identify);
233
234

```

```

219 cout << "\n\nThe recruitment information indicate that the Recruit Name is " << stud_5 << " and the age of him/her is " << age_5 << " ,the codename (FB Acc) " <<
220 cin.ignore();
221 //-----
222
223
224
225 // =====
226 //Just an Extra thingy
227 cout << "\n===== The Beginnings End =====\n";
228 cout << "\n\nAre you done with your adventure?\n\n";
229
230 string identify;
231 cout << "Enter you Confirmation Traveler: ";
232 getline(cin, identify);
233
234 if (identify == "yes" || identify == "Yes") {
235     cout << "\n\nYou will now embark into the more difficult things traveler, I know you can do it!";
236 }
237 else {
238     cout << "\n\nI see, sometimes it is better to stay first before going into more difficult things traveler and I respect that";
239 }
240
241 return 0;
242 }
```

Hello Dear Traveller I See That You Have Made your First Step Into This Lesson
May I ask what is your name dear traveler: Zeanwyn Merillo
I see that your name is Zeanwyn Merillo what a splendid name it is dear traveler!!
[-----]
What country you are from (Block section): TN04
Ohhh so traveler you are from TN04 ,I see
[-----]
Traveler what is the date today, I forgot: 9/18/2025
Thank you for telling me the date
[-----]
Traveler aka Zeanwyn Merillo you will now embark on the first step in your journey even though it will be short

===== Your First Task in Adventure: Average of Your Gold Gathered from Slaying Mobs in 5 Days =====

Traveler I know you have slain a mobs along the way so why not input the golds you have gain during the 5 days of you adventuring!

First day of slaying mobs 1: 97
Second day of slaying mobs 2: 100
Third day of slaying mobs 3: 75
Fourth day of slaying mobs 4: 85
Fifth day of slaying mobs 5: 75
The general average of your 5 days worth of slaying mobs is 86 golds what a good amount of golds you have

===== Your Second Task in Adventure: The Recruitment Information For Your Party =====

Of course when having a party you need a details first right, so why not list down the information of the members your eyes have on!!

Enter Details For Your Recruit Person 1
May I ask what is the Full Name of the Recruit Person: Nathan Merin
What is the Age: 18
What is the Codename of the Person (Facebook Account): SaladAss
Where he/she came from (Block Section): BS11S2

Activate Windows
Go to Settings to activate Windows.

```
The recruitment information indicate that the Recruit Name is Nathan Merin and the age of him/her is 18 ,the codename (FB Acc) is SaladAss and lastly, his/her place (section) is BS11S2 ,Correct?  
[-----]  
  
Enter Details For Your Recruit Person 2  
  
May I ask what is the Full Name of the Recruit Person: Zach Asilo  
What is the Age: 18  
What is the Codename of the Person (Facebook Account): Bunxhyzai  
Where he/she came from (Block Section): TN04  
  
The recruitment information indicate that the Recruit Name is Zach Asilo and the age of him/her is 18 ,the codename (FB Acc) is Bunxhyzai and lastly, his/her place (section) is TN04 ,Correct?  
[-----]  
  
Enter Details For Your Recruit Person 3  
  
May I ask what is the Full Name of the Recruit Person: Rafael Marmol  
What is the Age: 18  
What is the Codename of the Person (Facebook Account): Raf  
Where he/she came from (Block Section): TN04  
  
The recruitment information indicate that the Recruit Name is Rafael Marmol and the age of him/her is 18 ,the codename (FB Acc) is Raf and lastly, his/her place (section) is TN04 ,Correct?  
[-----]  
  
Enter Details For Your Recruit Person 4  
  
May I ask what is the Full Name of the Recruit Person: Brent Angelo Orlanes  
What is the Age: 20  
What is the Codename of the Person (Facebook Account): Shiczo  
Where he/she came from (Block Section): 12-STEM_2  
  
The recruitment information indicate that the Recruit Name is Brent Angelo Orlanes and the age of him/her is 20 ,the codename (FB Acc) is Shiczo and lastly, his/her place (section) is 12-STEM_2 ,Correct?  
[-----]  
  
Enter Details For Your Recruit Person 5  
  
May I ask what is the Full Name of the Recruit Person: Yohan Jakob Ibo  
What is the Age: 19  
What is the Codename of the Person (Facebook Account): Noot_noot  
Where he/she came from (Block Section): TN05
```

Activate Windows
Go to Settings to activate Windows.

```
Enter Details For Your Recruit Person 5  
  
May I ask what is the Full Name of the Recruit Person: Yohan Jakob Ibo  
What is the Age: 19  
What is the Codename of the Person (Facebook Account): Noot_noot  
Where he/she came from (Block Section): TN05  
  
The recruitment information indicate that the Recruit Name is Yohan Jakob Ibo and the age of him/her is 19 ,the codename (FB Acc) Noot_noot and lastly, his/her place (section) is TN05 ,Correct?  
===== The Beginnings End =====  
  
Are you done with your adventure?  
Enter your Confirmation Traveler: Yes  
  
You will now embark into the more difficult things traveler, I know you can do it!  
...Program finished with exit code 0  
Press ENTER to exit console.
```

Activate Windows
Go to Settings to activate Windows.

CODE IN TEXT:

Hello Dear Traveller I See That You Have Made your First Step Into This Lesson

May I ask what is your name dear traveler: Zeanwyn Merillo

I see that your name is Zeanwyn Merillo what a splendid name it is dear traveler!!

[-----]

What country you are from (Block section): TN04

Ohhh so traveler you are from TN04 ,I see

[-----]

Traveler what is the date today, I forgot: 9/18/2025

Thank you for telling me the date

[-----]

Traveler aka Zeanwyn Merillo you will now embark on the first step in your journey even though it will be short

===== Your First Task in Adventure: Average of Your Gold Gathered from Slaying Mobs in 5 Days =====

Traveler I know you have slain a mobs along the way so why not input the golds you have gain during the 5 days of you adventuring!

First day of slaying mobs 1: 97

Second day of slaying mobs 2: 100

Third day of slaying mobs 3: 75

Fourth day of slaying mobs 4: 85

Fifth day of slaying mobs 5: 75

The general average of your 5 days worth of slaying mobs is 86 golds what a good amount of golds you have

===== Your Second Task in Adventure: The Recruitment Information For Your Party =====

Of course when having a party you need a details first right, so why not list down the information of the members your eyes have on!!

Enter Details For Your Recruit Person 1

May I ask what is the Full Name of the Recruit Person: Nathan Merin

What is the Age: 18

What is the Codename of the Person (Facebook Account): SaladAss

Where he/she came from (Block Section): BS11S2

The recruitment information indicate that the Recruit Name is Nathan Merin and the age of him/her is 18 ,the codename (FB Acc) is SaladAss and lastly, his/her place (section) is BS11S2 ,Correct?

[-----]

Enter Details For Your Recruit Person 2

May I ask what is the Full Name of the Recruit Person: Zach Asilo

What is the Age: 18

What is the Codename of the Person (Facebook Account): Bunxhyzai

Where he/she came from (Block Section): TN04

The recruitment information indicate that the Recruit Name is Zach Asilo and the age of him/her is 18 ,the codename (FB Acc) is Bunxhyzai and lastly, his/her place (section) is TN04 ,Correct?

[-----]

Enter Details For Your Recruit Person 3

May I ask what is the Full Name of the Recruit Person: Rafael Marmol

What is the Age: 18

What is the Codename of the Person (Facebook Account): Raf

Where he/she came from (Block Section): TN04

The recruitment information indicate that the Recruit Name is Rafael Marmol and the age of him/her is 18 ,the codename (FB Acc) is Raf and lastly, his/her place (section) is TN04 ,Correct?

[-----]

Enter Details For Your Recruit Person 4

May I ask what is the Full Name of the Recruit Person: Brent Angelo Orlanes

What is the Age: 20

What is the Codename of the Person (Facebook Account): Shiczo

Where he/she came from (Block Section): 12-STEM_2

The recruitment information indicate that the Recruit Name is Brent Angelo Orlanes and the age of him/her is 20 ,the codename (FB Acc) is Shiczo and lastly, his/her place (section) is 12-STEM_2 ,Correct?

[-----]

Enter Details For Your Recruit Person 5

May I ask what is the Full Name of the Recruit Person: Yohan Jakob Ibo

What is the Age: 19

What is the Codename of the Person (Facebook Account): Noot_noot

Where he/she came from (Block Section): TN05

The recruitment information indicate that the Recruit Name is Yohan Jakob Ibo and the age of him/her is 19 ,the codename (FB Acc) Noot_noot and lastly, his/her place (section) is TN05 ,Correct?

===== The Beginnings End

Are you done with your adventure?

Enter you Confirmation Traveler: Yes

You will now embark into the more difficult things traveler, I know you can do it!

...Program finished with exit code 0

Press ENTER to exit console.