

CT103: Week 4 Lab Session (19/10/2021)

Note: This assignment will count towards your final grade.

*Make sure you submit your solution by following the “**Submission Instructions**” at the end of this document. An exception will be made this week so that you have **until midnight 19/10/2021 to submit your solution on Blackboard.***

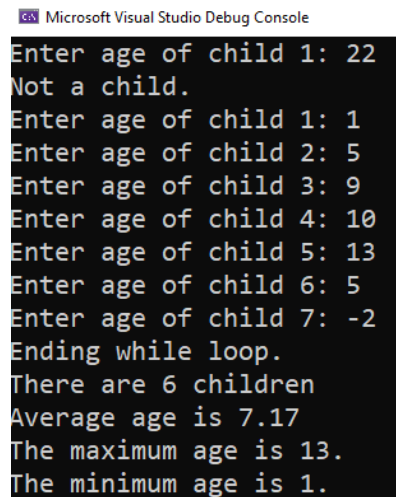
Please make sure you **write comments** explaining what your code does. Start your C program with a **comment stating your; Name, Student ID and Date.**

Write a C program that does the following:

1. Read in the age of any number of children in a family using a while loop. The user should be able to escape the while loop by entering an age <0. (20 marks)
2. Count how many children there are. Print result to the screen. (20 marks)
3. Calculate the average age of the children. Print this to the screen at the end. When calculating the average age, decimal point is important, e.g. age 1 = 10, age 2 = 11, average = 10.5. (20 marks)
4. Keep track of the oldest and youngest child. Print the ages of each to the screen at the end. (20 marks)
5. If an age entered is 18 or greater. Print a message that the age entered is not for a child. Do not count this age when determining the average age, the maximum age or the number of children in the family. (20 marks)

Your program should output something similar to the following screenshot. You must **enter different values** than those in the screenshot on the right.

This week, you must **upload a single screenshot** with your solution showing your program working for each of the requirements in tasks 1 – 5 above.



```
Microsoft Visual Studio Debug Console
Enter age of child 1: 22
Not a child.
Enter age of child 1: 1
Enter age of child 2: 5
Enter age of child 3: 9
Enter age of child 4: 10
Enter age of child 5: 13
Enter age of child 6: 5
Enter age of child 7: -2
Ending while loop.
There are 6 children
Average age is 7.17
The maximum age is 13.
The minimum age is 1.
```

Plagiarism Notice:

A definition of plagiarism is passing off the work of another person as one's own.

You are allowed to ask the lab tutors for help, collaborate with your classmates and review online and print resources for high-level problem solving and background research. You are each expected to complete this assignment individually. This means that every line of code and comment in your submission should be written by you alone. Please see the NUI Galway Code of Practice for Dealing with Plagiarism for further information on plagiarism: <https://www.nuigalway.ie/plagiarism/>

Plagiarism is a serious academic offence and may lead to a loss of some or all marks and/or disciplinary proceedings if it is detected in any of your submissions. Students who facilitate others to copy their work are also subject to plagiarism sanctions (including loss of marks), so you should not share your assignment solutions with classmates.

Submission Instructions:

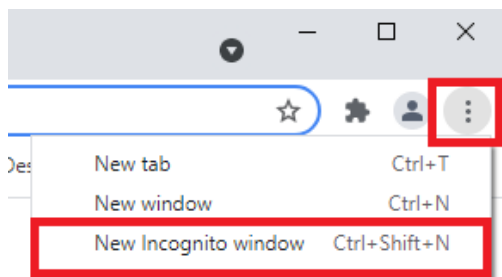
Please do the following to submit your solutions to the assignment.

- Copy and paste your code into a word document labelled 'AssignmentX_YOURNAME_ID.doc', e.g. 'Assignment4_JoeBloggs_123456789.doc'.
- Make sure to **include screenshots of your code working** in the .doc file. Use: 'Windows' + 'Shift' + 'S' on your keyboard. On a Mac, you should use the keys: 'shift' + 'command' + '3' or 'shift' + 'command' + '4'.
- Add both: **your .c program and your .doc files** to a folder called 'AssignmentX_YOURNAME_ID_Submission'.
- Zip the folder up and **submit the .zip file on blackboard** under CT103 Assessments. To zip the folder, right click and press 'Send To' then 'Compressed (zipped) folder'. On Mac, right click the folder and press 'Compress'.
- You can access blackboard using the instructions at the bottom of the page.
- If for some reason you still cannot access blackboard. Send your .zip folder to the lab instructors by email.

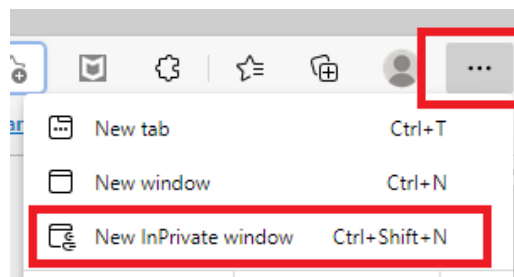
Instructions on how to access to Blackboard.

This is a temporary method of access to Blackboard to work-around access issues arising from the ongoing Security Incident

1. Open a browser window in Incognito/InPrivate mode



Chrome Incognito

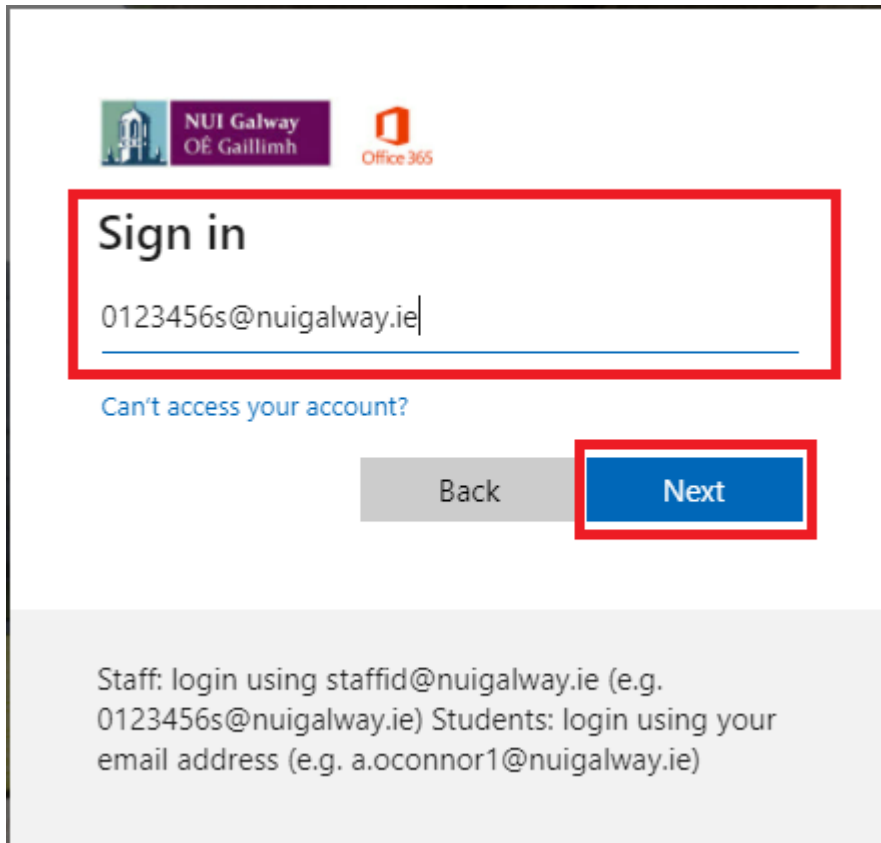



Microsoft Edge InPrivate

2. Go to <https://nuigalway.blackboard.com/>
3. Click the "Sign in with a third-party account" drop down and select the appropriate Blackboard SSO option. Staff select "Blackboard SSO Staff". Students select "Blackboard SSO Student"

A screenshot of the Blackboard Learn login page. The page features the 'Blackboard learn' logo at the top. Below the logo are input fields for 'USERNAME' and 'PASSWORD', followed by a 'Login' button. At the bottom of the page, a dropdown menu is open, showing the option 'Sign in with a third-party account'. This dropdown menu is highlighted with a red box, and it lists two options: 'NUI Galway Staff' and 'NUI Galway Student', each preceded by a small icon.

4. You will be directed to the University Office365 login page. Enter your O365 login details and click “Next”. Staff: login using staffid@nuigalway.ie (e.g. 0123456s@nuigalway.ie)
Students: login using your email address (e.g. a.oconnor1@nuigalway.ie)

 **NUI Galway**
OÉ Gaillimh

 Office 365

Sign in

0123456s@nuigalway.ie

[Can't access your account?](#)

[Back](#) [Next](#)

Staff: login using staffid@nuigalway.ie (e.g. 0123456s@nuigalway.ie) Students: login using your email address (e.g. a.oconnor1@nuigalway.ie)

5. Enter your password and click “Sign in”

Enter password


.....

[Forgot my password](#)

[Sign in](#)

6. If your O365 account uses Multi Factor Authentication (MFA) you will be texted a code. Enter the code and click "Verify"

Enter code

 We texted your phone +XXX XXXXXXXX04. Please enter the code to sign in.

☐ Don't ask again for 60 days

Having trouble? [Sign in another way](#)

[More information](#)

Verify

7. On the "Stay signed in" page click "Yes". You will then be logged into your Blackboard account

Stay signed in?

Do this to reduce the number of times you are asked to sign in.

☐ Don't show this again

No

Yes