

# Assignment Week 6CT103

## C Programming

### Submission:

REMEMBER: All files MUST be submitted

before you leave the lab *(even if you don't get it working!)*

You must be marked present by the lab tutor, and they must see your finished program before you leave

*The tutors are there to help you - don't hesitate to ask for help*

# Assignment: Stage 1

- *Write a program that has declared and initialised 2 arrays: student ID's and student marks*

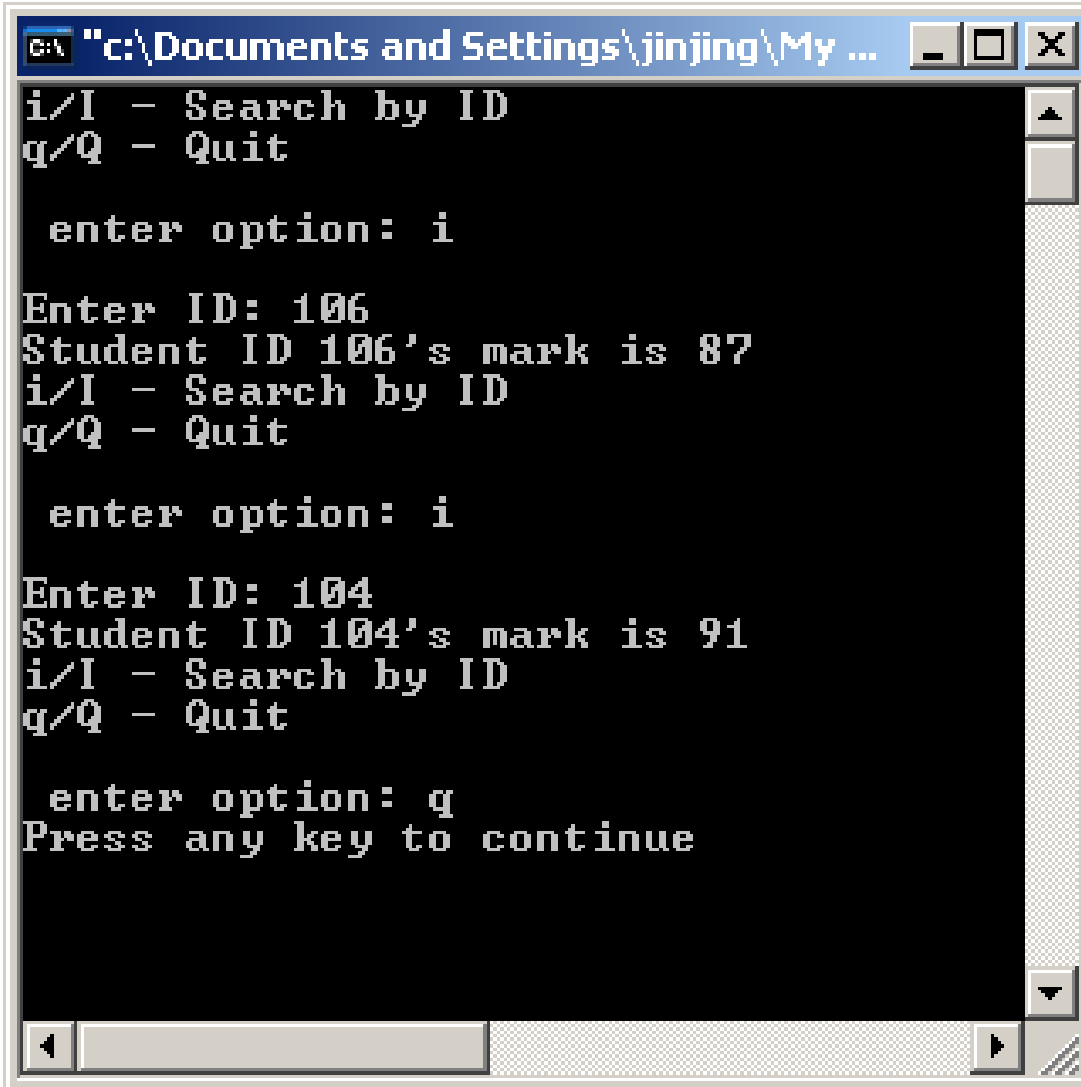
- *Assume the arrays are synchronised, for example:*

```
int ID[10] = {101,102,103,104};
```

```
int mark[10] = {45,67,23,91};
```

- *The user is then presented with a menu with the following options:*
  - *i/I : Search by ID*
  - *q/Q : Quit the program*
- *The program will search for the corresponding record and print out the students ID and mark as per the sample output*

# Sample Output, Stage 1



A screenshot of a Windows command prompt window. The title bar shows the path "c:\Documents and Settings\jinjing\My ...". The window contains the following text:

```
i/I - Search by ID
q/Q - Quit

enter option: i

Enter ID: 106
Student ID 106's mark is 87
i/I - Search by ID
q/Q - Quit

enter option: i

Enter ID: 104
Student ID 104's mark is 91
i/I - Search by ID
q/Q - Quit

enter option: q
Press any key to continue
```

The window has a standard Windows XP-style border with minimize, maximize, and close buttons in the top right corner. A scrollbar is visible on the right side of the text area, and a status bar is at the bottom.

# Assignment: Stage 2 (building on stage 1)

- *Add an array of student surnames*
  - *Assume the arrays are synchronised, for example:*

```
int ID[10] = {101,102,103,104};
```

```
char name[10][20] = {"Smith", "Jones", "Murphy", "Martin"};
```

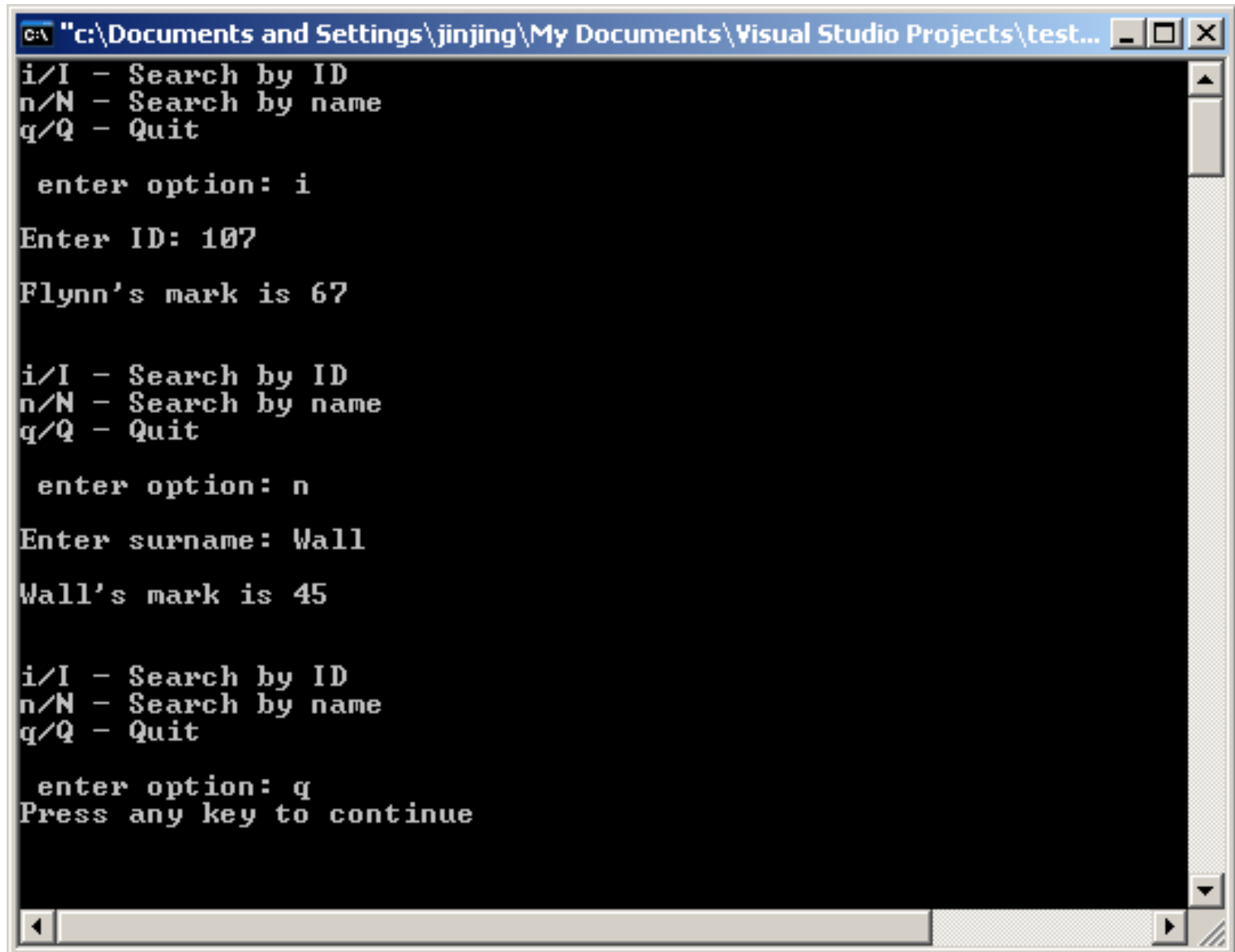
```
int mark[10] = {45,67,23,91};
```

- *The user is then presented with a menu with the following options:*
  - *Search by ID*
  - *Search by surname*
  - *Exit the program*
- *The program will search for the corresponding record and print out the students name and mark as per the sample output*
- *Hints On next page*

# Hints

- Use a while loop to keep repeating as long as the user doesn't choose the Quit option
- Use for loops to search through the arrays for the index of the element containing the searched for ID or surname
- Use the found index to print out the corresponding data in the name and marks arrays
- When you have: `char name[10][20] = {"Smith", "Jones", "Murphy", "Martin"};`
  - To print "Murphy": `puts (name[2]) ;`
  - OR `printf ("%s \n", name[2]);`
  - To compare strings (assume comp is an int):
    - `comp = strcmp(searchName, name[i])`
  - If the strings are the same (exactly) then comp will be equal to 0
  - With reading in char's remember to use `fflush(stdin)`
  - - before and after using `getchar( )`
  - You might need this (where c is a char): `c= toupper(getchar( )) ;`

# Sample Output



A screenshot of a Windows command prompt window. The title bar shows the path "c:\Documents and Settings\jinjing\My Documents\Visual Studio Projects\test...". The window contains the following text:

```
i/I - Search by ID
n/N - Search by name
q/Q - Quit

enter option: i

Enter ID: 107

Flynn's mark is 67

i/I - Search by ID
n/N - Search by name
q/Q - Quit

enter option: n

Enter surname: Wall

Wall's mark is 45

i/I - Search by ID
n/N - Search by name
q/Q - Quit

enter option: q
Press any key to continue
```