

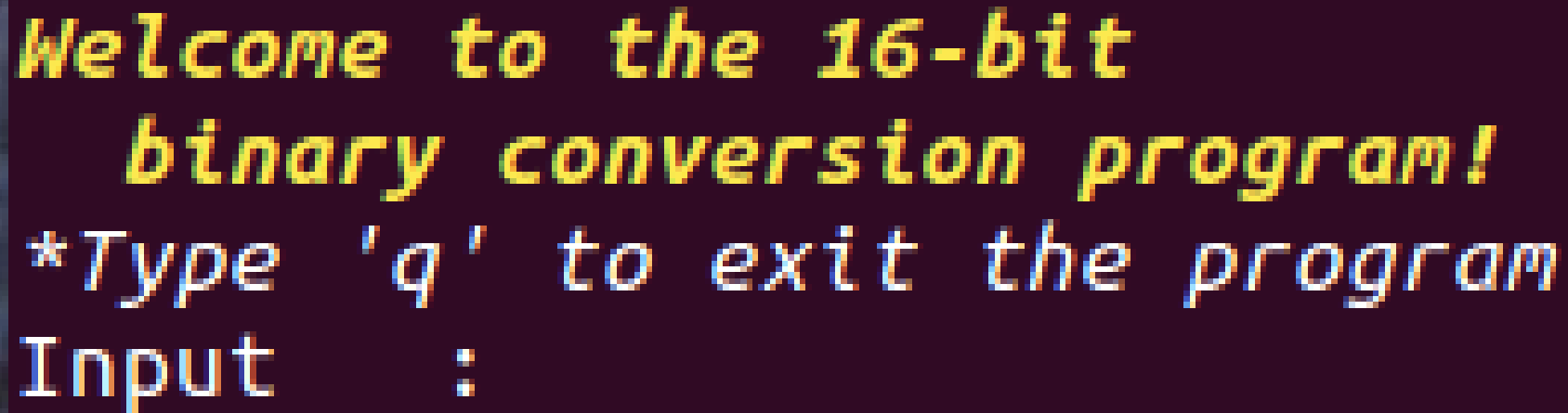
Homework 5

Binary conversion program

C PROGRAMMING CLASS

Homework Introduction

- In this homework you are about to make a program that could convert an integer number to its 16-bit binary representation.



```
Welcome to the 16-bit  
binary conversion program!  
*Type 'q' to exit the program  
Input   :
```

Some rules about this homework

- The program will keep asking the user for input.
- The program will stop if the user input the character 'q'.
- Please do not use `goto` statement in your program.
- You need to create your own function to convert the input to its binary representation.

```
Welcome to the 16-bit
binary conversion program!
*Type 'q' to exit the program
Input   : 0
Result  : 0000 0000 0000 0000
Input   : 1
Result  : 0000 0000 0000 0001
Input   : 32767
Result  : 0111 1111 1111 1111
Input   : 4096
Result  : 0001 0000 0000 0000
Input   : 1024
Result  : 0000 0100 0000 0000
Input   : q
moi@moi-VirtualBox:~/Desktop/HW5$
```

Some rules about this homework (cont.)

- The function call should be call by reference.
`void convToBin(/*Type your own parameter here*/);`
- The deadline for this homework is in 2 weeks, 5/24 if you took the Tuesday class, and 5/26 if you took the Thursday class.
- Demo time, Tuesday & Thursday, 16:30 – 18:00
- If you want the score for this homework then please do it by yourself, fight for it, you can do it.
- If you copy other's people code just to get score for this homework, then **SHAME ON YOU**.
- Got questions? E-mail me at moimoipalamoi@live.com, if I don't reply, try sending me another email. I might be busy and forgot to reply.

Grading Policy

- Able to perform conversion from unsigned positive integer to binary, **80**.
- Able to perform conversion from signed integer to binary, **90**.
- Able to detect errors in input, **100**. Examples of invalid input 'a', 65000, -65000, 3as4d, qwerty (2 points each).

```
Welcome to the 16-bit
  binary conversion program!
*Type 'q' to exit the program
Input   : -32768
Result  : 1000 0000 0000 0000
Input   : -32767
Result  : 1000 0000 0000 0001
Input   : 32767
Result  : 0111 1111 1111 1111
Input   : 32
Result  : 0000 0000 0010 0000
Input   : -32
Result  : 1111 1111 1110 0000
Input   : q
```

```
Welcome to the 16-bit
  binary conversion program!
*Type 'q' to exit the program
Input   : a
Invalid input!
Input   : 65000
Input is out of range!!!
Allowable range is -32768 to 32767
Input   : -65000
Input is out of range!!!
Allowable range is -32768 to 32767
Input   : 3as4d
Invalid input!
Input   : qwerty
Invalid input!
Input   : q
moi@moi-VirtualBox:~/Desktop/HW5$
```