Technical Informatics I
Assignment 1

**by
Dr Fatimah
Faculty of Mechanical Engineering
fatimahd@ump.edu.my**

Assignment 1

- ## Aims
  - Familiarise students with the basics of programming

- ## Expected Outcomes
  - Students are able to program simple codes to solve engineering problems

- ## References
  - Harry H. Cheng, 2010. C for Engineers and Scientists: An Interpretive Approach, McGraw Hill

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Write a program called `triangle.c` that calculates the surface area of the triangle that has a height of 8.47 meters. The code prompts the user for the value of the base in meters and outputs the value of the area of the triangle such that it looks like below:

```
>ch -u "triangle.c"
Enter the base in meters (m), h:
12.56
The area of the triangle with a base of 12.560000 m is 53.191600 m^3
>Exit code: 0
```

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- In this example, 12.56 was my input. Note that the surface area of the sphere may be calculated as follows:

- $A = \frac{1}{2}(height * base)$

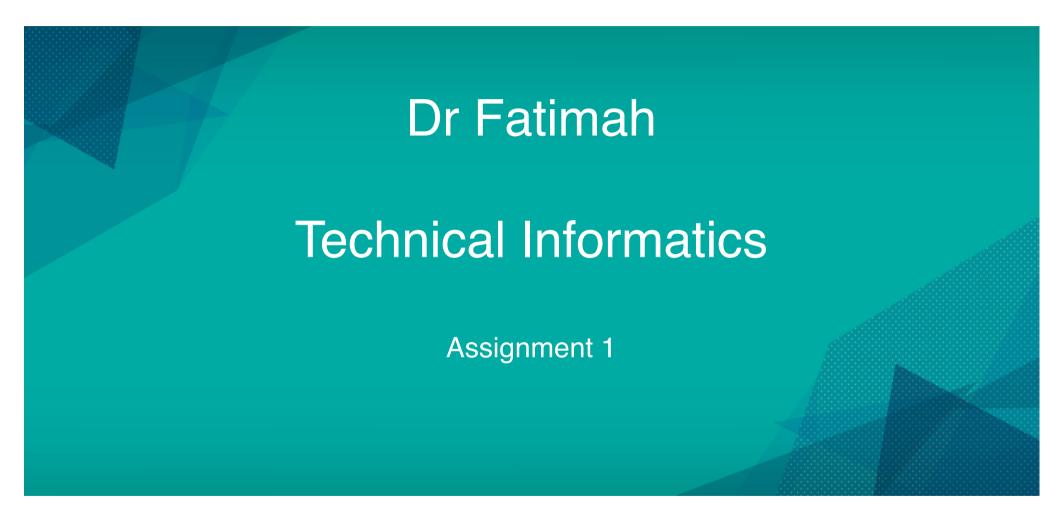- Where height = 8.47 meters.

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- In your code, make sure you:
  - Use appropriate comments
    - write your name, student ID and a brief explanation of what your code does
    - comment on certain important lines
  - Program structure
    - Include all important elements (stdio.h, int main(), return 0 etc)
  - Declaration of variables
    - Assign appropriate types to the variables
    - Assign appropriate names for the assigned variables
    - Assign appropriate values to the variables
  - Function printf()
    - Prompts variable from user
    - Print out final answer with appropriate format specifier and calls to variables
  - Function scanf()
    - Appropriate format specifier assigned to variable

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