Tutorial Sheet 1   
ESC101 – Fundamentals of Computing

**Revision (ask for doubts)**

#include<stdio.h>

int main(){

int a, b, c;

a = 5, b = 4;

c = a + b;

printf(“%d”,c);

return 0;

}

1. Declaring (multiple) integer variables
2. Simultaneous declaration and initialization
3. Basic integer operations (+,-,\*,/,%)
4. Integer division int c = 7/2 then c = 3
5. Mixing constants and variables int c = b + 2;
6. Print statements: use of format string to
   1. Printing multiple integers
   2. Printing newlines, quotes, backslash, percentage

**Sample Question to discuss**

#include<stdio.h>

int main(){

int a = 2, m = 1, r;

r = a \* m;

printf(“%d x %d = %d\n”, a, m, r);

m = 2;

// Alternatively m = m + 1;

r = a \* m;

printf(“%d x %d = %d\n”, a, m, r);

m = 3;

r = a \* m;

printf(“%d x %d = %d\n”, a, m, r);

return 0;

}

Write a program to print table of 2

2 x 1 = 2

2 x 2 = 4

…

2 x 10 = 20

Proper spacing, newlines needed.

Introduce increment operation i.e.

m = m + 1;

No need for tabs, spaces okay.

**Some Pitfalls and recognizing compiler error messages**

1. Use of undeclared variables (identifiers)
2. Printing uninitialized variables.
3. Assignment direction
   1. x = y will assign value in y to x not the other way round
   2. x + y = z makes sense in math but in C it is an error
   3. 2 = x also leads to an error
4. printf(“value of c”); will not print value of c. Use printf(“%d”,c);
5. printf needs exactly one format string i.e.

printf(“India won by %d”, r, ”runs and %d wickets.”, w);

is incorrect. Instead use

printf(“India won by %d runs and %d wickets”, r, w);