Lecture – 7

Expression: An expression is the combination of functions, operators, commas, variables, identifiers etc. Ex: x = 0 , x + +.

Statement: An expression as x = 0 , x + + or printf(…) becomes a statement when it is followed by a semicolon(;) as in

```
x + + ; x =
0 ;
printf(…) ;
```

Braces { and } are syntactically equivalent to a single statement.

if … else: if … else statement is used to express decisions. Formally the syntax is :

```
if (expression)
        statement1
else
        statement2
```

Here the else part is optional. The expression inside if … else statement expects a value. If the value is nonzero then it is true. If the value is 0 then it is false.

Example 1:

```
void main(void)
{
int x ,y=0, a=2, b=3 ;
if(y>0)
        x = a;
else
        x = b;
printf("%d",x);
}
```

```
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```

Example 2:

```
void main(void)
{
int x =1 ;
if(x - -)
        printf("Hellow");
printf(" friend");
}
```

```
Hellow friend
```

Example 3:
```
void main(void)
{
int x =1 ;
if(x - -)
       printf("Hellow");
if(x + +)
       printf(" everyone");
}
```

```
Hellow
```

else ... if:
```
if(expression 1)
        statement 1
else if(expression 2)
        statement 2
else if(expression 3)
        statement 3

        .
        .
        .

else
        statement n
```

else ... if checks its expression sequentially. When it found one expression is true then it will not check other expressions within that else ... if block.

Example 1:
```
void main(void)
{
int x =2 ;
if(x - -)
       printf("1");
else if(x - -)
       printf("2");
else if(x - -)
       printf("3");
else
       printf("None");
printf("%d",x);
}
```

```
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```

Example 2:
```
void main(void)
{
int x =1 ;
if(x - -)
      printf("1");
if(x - -)
      printf("2");
else if(x - -)
      printf("3");
if(x - -)
      printf("4");
printf("%d",x);
}
```

```
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```

Example 3:
```
void main(void)
{
int x =0,y =1 ;
if(x = 0)
      if(y = =2)
            printf("Hellow");
      else
            printf("Welcome");
printf("Nothing");
}
```

```
Nothing
```

Example 4:
```
void main(void)
{
int x =0 ;
if(x = = 0)
      printf("Hellow\n");
printf("Something\n");
}
```

```
Hellow
Something
```