GE3 COMPUTER SCIENCE

C AND C ++ LECTURE SERIES *FOR*

B.SC 3RD SEMESTER *BY*

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LECTURE 6

CONTROL STATEMENTS

BRANCHING

SELECTION

LOOPING

CONTROL STATEMENTS

IF – ELSE statement

- The **`if - else`** statement is used to carry out a logical test and then take one of two possible actions

```
if (expression) statement
```

CONTROL STATEMENTS

```
if (x < 0) printf("%f", x);

if (pastdue > 0)
   credit = 0;

if (x <= 3.0)   {
   y = 3 * pow(x, 2);
   printf("%f\n", y);
}

if ((balance < 1000.) || (status == 'R'))
   printf("%f", balance);

if ((a >= 0) && (b <= 5))   {
   xmid = (a + b) / 2;
   ymid = sqrt(xmid);
}
```

```
if (expression) statement 1 else statement 2
```

CONTROL STATEMENTS

```
if ((time >= 0.) && (time < 12.)) printf("Good Morning");
else if ((time >= 12.) && (time < 18.)) printf("Good Afternoon");
     else if ((time >= 18.) && (time < 24.)) printf("Good Evening");
          else printf("Time is out of range");
```

CONTROL STATEMENTS

LOOPING

WHILE

DO-WHILE

FOR

CONTROL STATEMENTS

WHILE

```
while (expression) statement
```

```
#include <stdio.h>

main()      /* display the integers 0 through 9 */

{
    int digit = 0;

    while (digit <= 9)  {
          printf("%d\n", digit);
          ++digit;
    }
}
```

```
0
1
2
3
4
5
6
7
8
9
```

CONTROL STATEMENTS

DO – WHILE

```
do statement while (expression);
```

```
#include <stdio.h>

main()    /* display the integers 0 through 9 */
{
    int digit = 0;

    do
    printf("%d\n", digit++);
    while (digit <= 9);
}
```

```
0
1
2
3
4
5
6
7
8
9
```

CONTROL STATEMENTS

FOR

```
for (expression 1; expression 2; expression 3) statement
```

```
#include <stdio.h>

main()    /* display the numbers 0 through 9 */

{
    int digit;

    for (digit = 0; digit <= 9; ++digit)
        printf("%d\n", digit);
}
```

```
0
1
2
3
4
5
6
7
8
9
```

CONTROL STATEMENTS

SWITCH statement

```
switch (expression) statement
```

```
case expression 1 :
case expression 2 :
    . . . . .
case expression m :
    statement 1
    statement 2
    . . . . .
    statement n
```

CONTROL STATEMENTS

SWITCH (cont.)

```
switch (choice = getchar())  {

case 'r':
case 'R':
      printf("RED");
      break;

case 'w':
case 'W':
      printf("WHITE");
      break;

case 'b':
case 'B':
      printf("BLUE");
}
```

CONTROL STATEMENTS

SWITCH (cont.)

```
switch (choice = toupper(getchar()))  {

case 'R':
     printf("RED");
     break;

case 'W':
     printf("WHITE");
     break;

case 'B':
     printf("BLUE");
     break;

default:
     printf("ERROR");
}
```

COMPILE AND RUN A C CODE

Thank You

End of Lecture 6

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