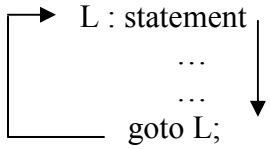
Lecture – 10

goto statement: We can jump from one statement to any statement by using **goto**.



Example:

```
void main() {
int i = 1;
L :
printf("%d",i+
+); if (i<=5)
      goto L ;
}
```

```
12345
```

Nested loop:

Example:

```
void main()
{
int i,j ;
for (i = 1; i<=3; i ++)
      for (j = 1; j<=2; j ++)
            printf("hellow\n");
}
```

```
hellow
hellow
hellow
hellow
hellow
hellow
```

More programs on loop:

Example 1:

```
void main()
{
int i ;
for (i = 1; i<=3; i ++)
      printf("%d",i);
}
```

```
123
```

Example 2:

```
void main()
{
int i =1;
while(i<=3)
      printf("%d",i ++);
}
```

123

Example 3:

```
void main()
{
int i =1;
do{
      printf("%d",i ++);
}while(i<=3);
}
```

123

Example 4:

```
void main()
{
int i ;
for (i = 1; i<=3; i ++) ;
      printf("%d",i);
}
```

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Example 5:

```
void main()
{
int i ;
for (i = 32766; i<=32768; i ++)
      printf("%d",i);
}
```

3276632767-32768
……
……
……
……

It will be an **infinite loop** because maximum value of i can be 32767. So i<=32768 is an always true condition which will create the **infinite loop**.

Example 6:

```
void main()
{
int i,j ;
for (i = 1,j = 2; j<=3; i ++)
      printf("%d",i);
}
```

1234567……
……
……
……
……

the variable j is not increased by the loop counter which will create **infinite loop**.

Example 7:

```
void main()
{
int i, j, x = 0 ;
for (i = 0; i < 3; i ++)
      for(j = 0; j < i;j++)
            switch (i + j -1)
            {
                  case 1 : x + = 3;
                           break;
                  case -1 : x + = 1;
                           break;
                  case 0 : x - = 2;
                           break;
                  default : x + = 1;
             }
             printf("%d",x);
}
```

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