

**King Saud University
Collage of Applied Medical Sciences
Biomedical Technology Department**

BMT 485

Level 9

Lab 4

Understanding C language programming

Objectives

Upon completion of this lab you'll be able to understand the following points

1. loops

for loop

while loop

do while loop

2. Decisions

The if statement

The if-else statement

The switch statement

The conditional operator

Introduction

This lab starts on using the C language statements that control the program flow and explain how to made decision.

Pre-requisite

"Subjects to be understood before launch this lab"

No special pre-requisites are needed.

Required equipments

- **PC and BorlandC under DOS**

Experiment steps

- for loop

for loop structure

for(initial loop variable; test condition; increment loop variable)

for loop prints number from 0 to 9

```
void main (void)
```

```
{
```

```
int count;
```

```
    for (count =0;count<=9;count++)
```

```
    {
```

```
        Printf("\n count=%d,count");// body of the loop
```

```
    }
```

```
}
```

```
////////////////////////////////////
```

```
void main(void)
```

```
{
```

```
int count, total;
```

```
    for(count=0,total=0;count<=9;count++)
```

```
    {
```

```
        total=total +count;
```

```
        printf("\n count=%d\t total=%d\n",count,total);
```

```
    }
```

```
}
```

```
////////////////////////////////////
```

```
void main(void)
```

```
{
```

```
int col;
```

```
    for(col=0;col<79;col++)
```

```
    {
```

```
        Printf("%c",0xdb);
```

```
    }
```

```
}
```

Nested if see the program "print_all_ch.cpp"

- **while loop**

while structure

```
while(loop expression)
```

```
{
```

```
//while body
```

```
}
```

```
void main(void)
```

```
{
```

```
int count=0, total=0;
```

```
    while(count<9)
```

```
    {
```

```
        total=total +count;
```

```
        printf("\n count=%d\t total=%d\n",count,total);
```

```
        count++;
```

```
    }
```

```
}
```

```
//check the program count ch
```

When to use while loop and for loop?

- **do while loop**

```
do{
```

```
}while(loop condition);
```

```
void main(void)
```

```
{
```

```
int count=0, total=0;
```

```
    do{
```

```
        total=total +count;
```

```
        printf("\n count=%d\t total=%d\n",count,total);
```

```
        count++;
```

```
    } while(count<10)
```

```
}
```