Practical Number 03

Areas covered	Operators , if conditions

1. Write a program to input two numbers and display the highest number.

```
#include <stdio.h>
int main() {
int x, y;
printf("Input first number: \n");
scanf("%d", &x);
printf("Input second number: \n");
scanf("%d", &y);
if (y > x) {
printf("The highest number is: %d \n", y);
} else {
printf("The highest number is: %d \n", x);
}
return 0;
}
```

2. Write a complete program to ask user enter three integer numbers, and then tell the user the largest value and smallest value among the three numbers.

```
#include <stdio.h>
int main() {
int x, y, z;
printf("Input first number: \n");
scanf("%d", &x);
printf("Input second number: \n");
scanf("%d", &y);
printf("Input Third number: \n");
scanf("%d", &z);
if (y > x && y > z) {
printf("The highest number is: %d \n", y);
} else if (z > x && z > y) {
printf("The highest number is: %d \n",z);
}else {
printf("The highest number is: %d \n",x);
}
if (y < x && y < z) {
```

```
printf("The smallest number is: %d \n", y);
} else if (z < x && z < y) {
printf("The smallest number is: %d \n",z);
}else {
printf("The smallest number is: %d \n",x);
}
return 0;
}
```

3.Display employee name, new salary, when the user inputs employee name, and basic salary. You can refer following formula and the table to calculate new salary: New Salary = Basic Salary + Increment

Basic Salary	Increment
Less than 5000	5% of Basic Salary
More than or equal 5000 and less than 10000	10% of Basic Salary
More than or equal 10,000	15% of Basic Salary

```
#include <stdio.h>
int main() {
char ename[10];
float bsal, newsal;
printf("Enter the employee name: ");
scanf("%s", ename);
printf("Enter the basic salary: ");
scanf("%f", &bsal);
if (bsal < 5000) {
newsal = bsal + (bsal * 0.05);
} else if (bsal >= 5000 && bsal < 10000) {
newsal = bsal + (bsal * 0.10);
} else {
newsal = bsal + (bsal * 0.15);
}
printf("Employee name: %s\n", ename);
printf("New salary: %.2f\n", newsal);
return 0;
}
```

4. Diameter, Circumference and Area of a Circle) Write a program that reads in the radius of a circle and prints the circle's diameter,

each of these calculations inside the printf statement(s) and use the conversion specifier %f.

```
#include <stdio.h>
#define PI 3.14159
int main() {
float r, d, c, a;
printf("Enter the radius of the circle: ");
scanf("%f", &r);
d = 2 * r;
c = 2 * PI * r;
a = PI * r * r;
printf("Diameter of the circle: %.2f\n", d);
printf("Circumference of the circle: %.2f\n", c);
printf("Area of the circle: %.2f\n", a);
return 0;
}
```

5. Write a program that reads in two integers and determines and prints if the first is a multiple of the second.

```
#include <stdio.h>
int main() {
int x, y;
printf("Enter the first Number: ");
scanf("%d", &x);
printf("Enter the second Number: ");
scanf("%d", &y);
if (x % y == 0) {
printf("%d is a multiple of %d\n", x, y);
} else {
printf("%d is not a multiple of %d\n", x, y);
}
return 0;
}
```

6. Write a C program that prints the integer equivalents of some uppercase letters, lowercase letters, digits and special symbols. As a minimum, determine the integer equivalents of the following: A B C a b c 0 1 2 $ * + / and the blank character.

```
#include <stdio.h>
int main() {
printf("Integer equivalents of Capital letters:\n");
printf("A: %d\n", 'A');
printf("B: %d\n", 'B');
printf("C: %d\n", 'C');
printf("Integer equivalents of Simple letters:\n");
printf("a: %d\n", 'a');
```

```
printf("b: %d\n", 'b');
printf("c: %d\n", 'c');
printf("Integer equivalents of Numbers:\n");
printf("0: %d\n", '0');
printf("1: %d\n", '1');
printf("2: %d\n", '2');
printf("Integer equivalents of special symbols:\n");
printf("$: %d\n", '$');
printf("*: %d\n", '*');
printf("+: %d\n", '+');
printf("/: %d\n", '/');
printf("Integer equivalent of blank character(space): %d\n", ' ');
return 0;
}
```

The gross remuneration of a company salesman comprises the Basic Salary and certain additional allowances and bonuses as given below: Salesmen with over 5 years' service receive a 10% additional allowance of Basic Salary each month. Salesmen working in Colombo (Input character 'C' if the city is Colombo) receive an additional allowance of Rs. 2,500/- per month. The monthly bonus payment is computed as given below:

Monthly Sales(Rs)	Bonus as a percentage of monthly sales
0-25000	10%
25000-50000	12%
50000	15%

```
#include <stdio.h>
int main() {
char city, ex;
float bsal, newsal;
printf("Enter the basic salary: ");
scanf("%f", &bsal);
printf("Over 5 years of service (Y/N): ");
scanf(" %s", &ex);
printf("Working in Colombo (Input C if the city is Colombo): ");
scanf(" %s", &city);
if (bsal < 25000) {
```

```
newsal = bsal + (bsal * 0.10);
} else if (bsal >= 25000 && bsal < 50000) {
newsal = bsal + (bsal * 0.12);
} else {
newsal = bsal + (bsal * 0.15);
}
if (ex == 'Y' || ex == 'y') {
newsal = newsal + (bsal * 0.10);
}
if (city == 'C' || city == 'c') {
newsal = newsal + 2500;
}
printf("New salary: %.2f\n", newsal);
return 0;
}
```