A3-Ankit Kumar Patel(MCA 1st Year)

1. Display multiple variables.

```
#include <stdio.h>


int main()
{
   int a = 125, b = 12345;
   long ax = 1234567890;
   short s = 4043;
   float x = 2.13459;
   double dx = 1.1415927;
   char c = 'W';
   unsigned long ux = 2541567890;


   printf("a + c =  %d\n", a + c);
   printf("x + c = %f\n", x + c);
   printf("dx + x = %f\n", dx + x);
   printf("dx + ax =  %ld\n",dx + ax);
   printf("a + x = %f\n", a + x);
   printf("s + b =  %d\n", s + b);
   printf("ax + b = %ld\n", ax + b);
```

```
    printf("s + c =  %hd\n", s + c);
    printf("ax + c = %ld\n", ax + c);
    printf("ax + ux = %lu\n", ax + ux);

    return 0;
}
```

Output:

```
a + c =  212

x + c = 89.134590

dx + x = 3.276183

dx + ax =  2147483630

a + x = 127.134590

s + b =  16388

ax + b = 1234580235

s + c =  4130

ax + c = 1234567977
```

2. Convert specified days into years, weeks and days.

```
#include <stdio.h>
int main()
{
   int days, years, weeks;

   days = 1329;
   years = days/365;
   weeks = (days % 365)/7;
   days = days- ((years*365) + (weeks*7));

   printf("Years: %d\n", years);
   printf("Weeks: %d\n", weeks);
   printf("Days: %d \n", days);

   return 0;
}
```

Output:

```
Years: 3

Weeks: 33

Days: 3
```

3. Accepts two item’s weight (floating points' values) and number of purchase (floating points' values) and calculate the average value of the items.

```
#include <stdio.h>
int main()
  {
        float weight1, np1, weight2, np2, avg;
   printf("Weight of Item1: ");
        scanf("%f", &weight1);
        printf("Number of Item1: ");
        scanf("%f", &np1);
        printf("Weight of Item2: ");
        scanf("%f", &weight2);
        printf("Number of Item2: ");
        scanf("%f", &np2);
        avg = ((weight1 * np1) + (weight2 * np2)) / (np1 + np2);
        printf("Average Value = %f\n", avg);
        return 0;
}
```

Output:

```
Weight of Item1: 12.43

Number of Item1: 9

Weight of Item2: 67.899

Number of Item2: 3
```

```
Average Value = 26.297251
```

4. Create enumerated data type for 7 days and display their values in integer constants

```
#include <stdio.h>
int main()
{
enum week{Sun, Mon, Tue, Wed, Thu, Fri, Sat};
printf("Sun = %d", Sun);
printf("\nMon = %d", Mon);
printf("\nTue = %d", Tue);
printf("\nWed = %d", Wed);
printf("\nThu = %d", Thu);
printf("\nFri = %d", Fri);
printf("\nSat = %d", Sat);
return 0;
}
```

Output:

```
Sun = 0

Mon = 1

Tue = 2

Wed = 3
```

```
Thu = 4

Fri = 5
Sat = 6
```

5. Converts Centigrade to Fahrenheit.

```
#include <stdio.h>
int main()
{
   float centi,far;
   printf("Enter temperature in centigrade:");
   scanf("%f", &centi);
   far=(centi*9/5) +32;
   printf("Temperature in Farhenheit=%f",far);

return 0;
}
```

Output:

```
Enter temperature in centigrade:32

Temperature in Farhenheit=89.599998
```

6. Takes minutes as input, and display the total number of hours and minutes.

```
#include <stdio.h>
int main()
{
   int mins,total_hour,total_mins;
   printf("Enter Minutes:");
   scanf("%d",&mins);
   total_hour=mins/60;
   total_mins=mins%total_hour;
   printf("%d Hrs\t",total_hour);
   printf("%d Mins",total_mins);


return 0;
}
```

Output:

```
Enter Minutes:664

11 Hrs  4 Mins
```

7. Prints the perimeter of a rectangle to take its height and width as input.

```
#include <stdio.h>
int main()
```

```
{
   float peri,height,width;
   printf("Enter Height:");
   scanf("%f",&height);
   printf("Enter Width:");
   scanf("%f",&width);
   peri=2*(height+width);
   printf("The Perimeter Of Rectangle is:%f",peri);

return 0;
}
```

Output:

```
Enter Height:7

Enter Width:9

The Perimeter Of Rectangle is:32.000000
```

8. By using +, /, %=, >=, ! operators.

```
#include<stdio.h>
int main()
{
```

```
    int a=20,b=15,sum,result;
    float di;
    sum=a+b;
    printf("Sum=%d \n",sum);
    di=a/b;
    printf("Division=%f \n",di);
    a%=b;
    printf("Reminder= %d\n", a);
    a>=b;
    printf("%d >= %d is %d \n", a, b, a >= b);
    a!=b;
    printf("%d != %d is %d \n",a,b, a!=b);
    return 0;
}
```

Output:

```
Sum=35

Division=1.000000

Reminder= 5

5 >= 15 is 0

5 != 15 is 1
```

9. By using &, |, >>, ?:, || operators.

```
#include <stdio.h>
int main()
{
   int a= 5,b = 9;
   printf("a&b = %d\n", a & b);

   printf("a|b = %d\n", a | b);

   printf("b>>1 = %d\n", b >> 1);

   printf("a||b= %d\n",a || b);

   (a & b) ? printf("True ") : printf("False ");

   return 0;
}
```

Output:

```
a&b = 1

a|b = 13

b>>1 = 4

a||b= 1
```

```
True
```

10. Find the Size of int, float, double and char.

```
#include<stdio.h>
int main()
{
   printf("Size of char: %ld byte\n",sizeof(char));
   printf("Size of int: %ld bytes\n",sizeof(int));
   printf("Size of float: %ld bytes\n",sizeof(float));
   printf("Size of double: %ld bytes", sizeof(double));
   return 0;
}
```

Output:

```
Size of char: 1 byte

Size of int: 4 bytes

Size of float: 4 bytes

Size of double: 8 bytes
```