Assignment : 3

(1)
```
#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("((int) dx) + ax = %ld \n", ((int) 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

((int) dx) + ax = 1234567891

ax x = 127.134590

s+b = 16388

ax+b = 1234580235

s+c = 4130

ax+c = 1234567977

ax+ux = 377613578.0

(2)

```
#include <stdio.h>
int main()
{
    int days, years, weeks;
    days = 1329;
    years = days / 365;
    weeks = (days % 365) / 7;
    days = days - ((years * 365) + (weeks *
    printf ("years : %d \n", years);
    printf ("weeks : %d \n", weeks);
    printf ("Days : %d \n", days);
    return 0;
}
```

output :

years : 3

weeks : 5

Days : 3

(3)
```
#include <stdio.h>
int main()
{
    double wi1, ci1, wi2, ci2, result;
    printf ("weight - item1 :");
    scanf ("%lf", &wi1);
    printf ("No. of item1 :");
    scanf ("%lf", &ci1);
    printf ("weight - item2 :");
    scanf ("%lf", &wi2);
    printf ("No. of item 2 :");
    scanf ("%lf", &ci2);
    result = ((wi1 * ci1) + (wi2 * ci2)) /
                (ci1 + ci2);
    printf ("Average value = %f \n",
                result);
    return 0;
```

output :

```
weight - item1 : 15
No. of item1 : 5
weight - item2 : 25
No. of item 2 : 4
Average value : 19.444444
```

(4)
```
#include <Stdio.h>
int main()
{
    enum week { Sun, Mon, TUE, Wed, Thu, Fri, Sat};
    printf ("Sun = %d", Sun);
    printf ("\n Mon = %d", Mon);
    printf ("\n TUE = %d", TUE);
    printf ("\n Wed = %d", Wed);
    printf ("\n Thu = %d", Thu);
```

printf("\n Fri : %d", Fri);
printf("\n Sat : %d", Sat);
return 0;
}

output: Sun : 0
Mon : 1
Tue : 2
Wed : 3
Thu : 4
Fri : 5
Sat : 6

(5) #include <stdio.h>
float temp_f;
float temp_c;
char line_text [50];
int main()
{
printf("Input a temperature (in centigr
fgets(line_text, sizeof(line_text),
sscanf(line_text, "%f", &temp_c);
temp_f = ((9.0/5.0) * temp_c) + 32.0
printf("%.1f degrees Fahrenheit.\n",
temp_f);
return 0;
}

output:
Input a temperature in centigrade:
113.0 degrees Fahrenheit.

6) #include <stdio.h>
int tot_mins;
int hrs;
int mins;
const int MINsHOUR = 60;
char line_text[50];
int main()
{
printf("Input minutes:");
fgets(line_text, sizeof(line_text), stdin);
sscanf(line_text, "%d", &tot_mins);
hrs = (tot_mins / MINsHOUR);
mins = (tot_mins % MINsHOUR);
printf("%d Hours, %d Minutes\n", hrs, mins);
return(0);
}

Output:
Input minutes: 547
9 Hours, 6 Mins.

7) #include <stdio.h>
int main()
{
float rec_width;
float rec_height;
float rec_perimeter;
Printf("Input the height of the
Rectangle:");
Scanf(line_text, "%f", &rec_height);
Printf("Input the width of the rectangle:");
Scanf(line_text, "%f", &rec_width);
rec_perimeter = 2.0 * (rec_height + rec_width);

Printf ("perimeter of the Rectangle is
%d\n", ... perimeter);

return 0;

output:

Input the height of the rectangle:
Input the width of the rectangle:
perimeter of the rectangle is : 24.

(8)
```
#include <stdio.h>
int main()
{
    int a=9, b=3, c;
    c = a+b;
    printf ("a+b = %d \n", c);
    c = a/b;
    printf ("a/b = %d \n", c);
    c = a%b;
    printf ("a%b = %d \n", c);
    c = a>=b;
    printf ("a>=b = %d \n", c);
    c = !a;
    printf ("a = !a = %d \n", c);
    return 0;
}
```

output:

(9)
```
#include <stdio.h>
void main()
{
    int a = 12, b = 25;
    printf("output = %d", a<<b);
    printf("output = %d", a|b);
    printf("a>>1 = %d \n", a>>1);
    printf();
}
```

Output : 8
2 9
6

(10)
```
#include <stdio.h>
void main()
{
    int intType;
    float floatType;
    double doubleType;
    char charType;
    printf("Size of int : %zu bytes\n",
                sizeof(intType));
printf("Size of float : %zu bytes\n", sizeof(floatType));
printf("Size of double : %zu bytes\n", sizeof(doubleType));
printf("Size of char : %zu bytes\n", sizeof(charType));
    return 0;
}
```

Output : Size of int : 4 byte
Size of float : 4 byte
Size of double : 8 byte
Size of char : 1 byte.