

Assignment 2

Question 1 :

```
#include <stdio.h>
```

```
int main() {
    int a;
    printf("Enter a number: ");
    scanf("%d", &a);
    if (a == 1) {
        printf("Monday\n");
    } else if (a == 2) {
        printf("Tuesday\n");
    } else if (a == 3) {
        printf("Wednesday\n");
    } else if (a == 4) {
        printf("Thursday\n");
    } else if (a == 5) {
        printf("Friday\n");
    } else if (a == 6) {
        printf("Saturday\n");
    } else if (a == 7) {
        printf("Sunday\n");
    } else {
        printf("There are only 7 days in a week.\n");
    }
    return 0;
}
```

Output :

```
kaushik@Freedom-PC:~/FCP_assignment_2$ gcc question1.c -o question1
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question1
Enter a number: 5
Friday
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question1
Enter a number: 8
There are only 7 days in a week.
kaushik@Freedom-PC:~/FCP_assignment_2$ █
```

Question 2 :

```
#include <stdio.h>
```

```
int main() {
    int a;
    char c;
    int b;
    printf("Enter what to calculate in (a operator b) form\n");
    scanf("%d%c%d", &a, &c, &b);
    switch(c) {
        case '+':
            printf("%d\n", (a+b));
            break;
        case '-':
            printf("%d\n", (a-b));
            break;
        case '*':
            printf("%d\n", (a*b));
            break;
        case 'x':
            printf("%d\n", (a*b));
            break;
        case '/':
            printf("%d\n", (a/b));
            break;
    }
    return 0;
}
```

Output :

```
kaushik@Freedom-PC:~/FCP_assignment_2$ gcc question2.c -o question2
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question2
Enter what to calculate in (a operator b) form
2*4
8
kaushik@Freedom-PC:~/FCP_assignment_2$
```

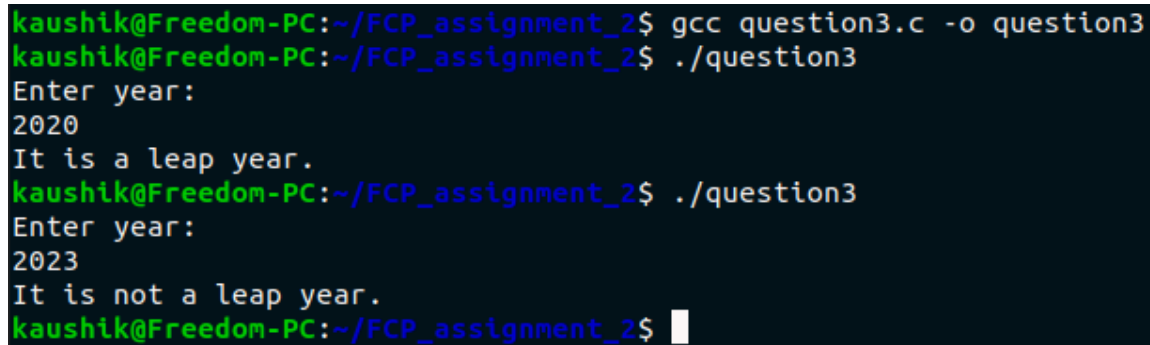
```
kaushik@Freedom-PC:~/FCP_assignment_2$ gcc question2.c -o question2
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question2
Enter what to calculate in (a operator b) form
2+0324343
324345
kaushik@Freedom-PC:~/FCP_assignment_2$
```

Question 3 :

```
#include <stdio.h>
int main() {
    int year;
    printf("Enter year:\n");
    scanf("%d", &year);

    if (year % 4 == 0) {
        printf("It is a leap year.\n");
    } else {
        printf("It is not a leap year.\n");
    }
    return 0;
}
```

Output :



A terminal window with a dark background and green text. The prompt is 'kaushik@Freedom-PC:~/FCP_assignment_2\$'. The user enters 'gcc question3.c -o question3'. The prompt changes to 'kaushik@Freedom-PC:~/FCP_assignment_2\$'. The user enters './question3'. The program prompts 'Enter year:' and the user enters '2020'. The program outputs 'It is a leap year.'. The prompt changes back to 'kaushik@Freedom-PC:~/FCP_assignment_2\$'. The user enters './question3'. The program prompts 'Enter year:' and the user enters '2023'. The program outputs 'It is not a leap year.'. The prompt changes back to 'kaushik@Freedom-PC:~/FCP_assignment_2\$' with a cursor.

```
kaushik@Freedom-PC:~/FCP_assignment_2$ gcc question3.c -o question3
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question3
Enter year:
2020
It is a leap year.
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question3
Enter year:
2023
It is not a leap year.
kaushik@Freedom-PC:~/FCP_assignment_2$
```

Question 4 :

```
#include <stdio.h>

int main() {
    char a;
    printf("Enter a character:\n");
    scanf("%c", &a);

    if((a>64 && a<91) || (a>96 && a<123)) {
        printf("The character is an alphabet.\n");
    } else {
        printf("the character is not an alphabet.\n");
    }
    return 0;
}
```

```
}
```

Output :

```
kaushik@Freedom-PC:~/FCP_assignment_2$ gcc question4.c -o question4
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question4
Enter a character:
w
The character is an alphabet.
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question4
Enter a character:
(
the character is not an alphabet.
kaushik@Freedom-PC:~/FCP_assignment_2$
```

Question 5 :

Without tmp variable

```
#include <stdio.h>
```

```
int main() {
    int a;
    int b;
    printf("Enter two numbers:\n");
    scanf("%d%d", &a,&b);

    a = a+b;
    b = a-b;
    a = a-b;
    printf("%d %d\n", a,b);
    return 0;
}
```

With tmp variable

```
#include <stdio.h>
```

```
int main() {
    int a, b;
    printf("Enter two numbers: \n");
    scanf("%d %d", &a, &b);
```

```
    int tmp;
```

```

tmp = b;
b = a;
a = tmp;

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

return 0;
}

```

Output

```

kaushik@Freedom-PC:~/FCP_assignment_2$ gcc question5.c -o question5
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question5
Enter two numbers:
4 5
5 4
kaushik@Freedom-PC:~/FCP_assignment_2$ █

```

```

kaushik@Freedom-PC:~/FCP_assignment_2$ gcc question5_1.c -o question5_1
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question5_1
Enter two numbers:
4 5
5 4
kaushik@Freedom-PC:~/FCP_assignment_2$ █

```

Question 6 :

```

#include <stdio.h>
int main() {
    float a;
    printf("Enter a number:\n");
    scanf("%f", &a);

    int b = a/1;
    int c = b%10;
    printf("%d\n", c);
    return 0;
}

```

Output :

```

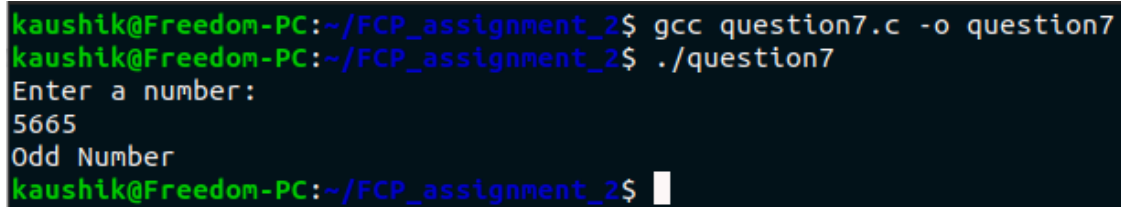
kaushik@Freedom-PC:~/FCP_assignment_2$ gcc question6.c -o question6
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question6
Enter a number:
45.6767676
5
kaushik@Freedom-PC:~/FCP_assignment_2$ █

```

Question 7 :

```
#include <stdio.h>
int main() {
    int a;
    printf("Enter a number: \n");
    scanf("%d", &a);
    if (a%2==0) {
        printf("Even Number\n");
    } else {
        printf("Odd Number\n");
    }
    return 0;
}
```

Output :



```
kaushik@Freedom-PC:~/FCP_assignment_2$ gcc question7.c -o question7
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question7
Enter a number:
5665
Odd Number
kaushik@Freedom-PC:~/FCP_assignment_2$
```

Question 8 :

```
#include <stdio.h>

int main() {
    int a;
    printf("Enter a number\n");
    scanf("%d", &a);

    if(a>0) {
        printf("Positive Number\n");
    } else if (a<0) {
        printf("Negative Number\n");
    } else {
        printf("Zero\n");
    }
    return 0;
}
```

Output :

```
kaushik@Freedom-PC:~/FCP_assignment_2$ gcc question8.c -o question8
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question8
Enter a number
45454
Positive Number
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question8
Enter a number
-4544
Negative Number
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question8
Enter a number
0
Zero
kaushik@Freedom-PC:~/FCP_assignment_2$ █
```

Question 9 :

```
#include <stdio.h>
int main() {
    int a, b, c;
    scanf("%d%d%d", &a, &b, &c);
    if ((a+b) > c && (b+c) > a && (c+a) > b) {
        if (a==b && b==c) {
            printf("Equilateral Triangle\n");
        } else if ((a==b) || (b==c) || (a==c)) {
            printf("Isosceles Triangle\n");
        } else {
            printf("Scalene Triangle\n");
        }
    } else {
        printf("The given sides do not form a triangle.\n");
    }
    return 0;
}
```

Output :

```
kaushik@Freedom-PC:~/FCP_assignment_2$ gcc question9.c -o question9
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question9
3 4 5
Scalene Triangle
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question9
4 5 5
Isosceles Triangle
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question9
5 5 5
Equilateral Triangle
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question9
1 2 3
The given sides do not form a triangle.
kaushik@Freedom-PC:~/FCP_assignment_2$
```

Question 10 :

```
#include <stdio.h>
int main() {
    float inches;
    printf("Enter the distance in inches\n");
    scanf("%f", &inches);

    float out;
    out = inches * 2.54;
    printf("%f", out);
    return 0;
}
```

Output :

```
kaushik@Freedom-PC:~/FCP_assignment_2$ gcc question_extra.c -o question_extra
kaushik@Freedom-PC:~/FCP_assignment_2$ ./question_extra
Enter the distance in inches
45
kaushik@Freedom-PC:~/FCP_assignment_2$
```