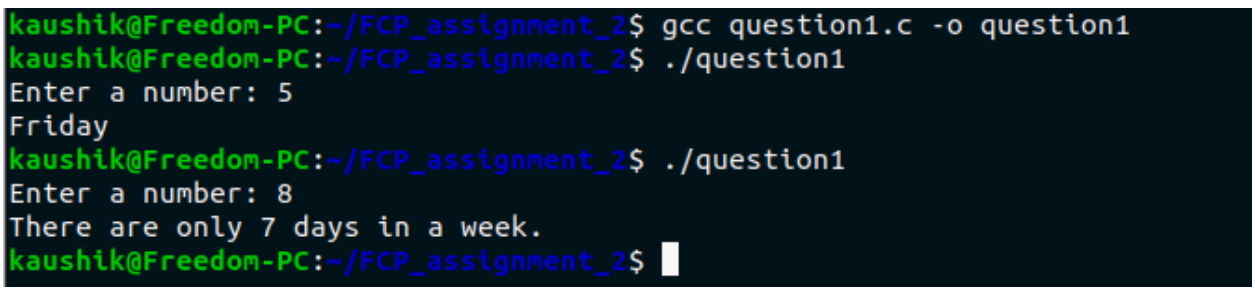
Assignment 2

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 :



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 :

```
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
114.300003
kaushik@Freedom-PC:~/FCP_assignment_2$
```