Ex_1.c

```c
/*
 * Ex_1.c
 *
 *  Created on: Jul 31, 2021
 *      Author: Sarah
 */


#include <stdio.h>

int main(){
    int input;
    printf("Enter an integer you want to check: ");
    fflush(stdout);
    fflush(stdin);
    scanf("%d", &input);
    if(input % 2 == 0)
        printf("%d is even", input);
    else
        printf("%d is odd", input);
    return 0;
}

```

Console

```
<terminated> (exit value: 0) Ex_1.exe [C/C++ Application]
Enter an integer you want to check: 5
5 is odd
```

Ex_1.c

```c
/*
 * Ex_1.c
 *
 *  Created on: Jul 31, 2021
 *      Author: Sarah
 */


#include <stdio.h>

int main(){
    int input;
    printf("Enter an integer you want to check: ");
    fflush(stdout);
    fflush(stdin);
    scanf("%d", &input);
    if(input % 2 == 0)
        printf("%d is even", input);
    else
        printf("%d is odd", input);
    return 0;
}

```

Console

```
<terminated> (exit value: 0) Ex_1.exe [C/C++ Application]
Enter an integer you want to check: 6
6 is even
```

Ex_2.c

```c
/*
 * Ex_2.c
 *
 *  Created on: Jul 31, 2021
 *      Author: Sarah
 */

#include <stdio.h>

int main(){
    char input;
    printf("Enter an alphabet: ");
    fflush(stdout);
    fflush(stdin);
    scanf("%c", &input);
    switch(input){
        case 'a':
        case 'e':
        case 'i':
        case 'o':
        case 'u':{
            printf("%c is a vowel", input);
            break;
        }
        default:{
            printf("%c is a consonant", input);
            break;
        }
    }
    return 0;
}

```

Console

```
<terminated> (exit value: 0) Ex_2.exe [C/C++ Application]
Enter an alphabet: k
k is a consonant
```

Ex_2.c

```c
/*
 * Ex_2.c
 *
 *  Created on: Jul 31, 2021
 *      Author: Sarah
 */

#include <stdio.h>

int main(){
    char input;
    printf("Enter an alphabet: ");
    fflush(stdout);
    fflush(stdin);
    scanf("%c", &input);
    switch(input){
        case 'a':
        case 'e':
        case 'i':
        case 'o':
        case 'u':{
            printf("%c is a vowel", input);
            break;
        }
        default:{
            printf("%c is a consonant", input);
            break;
        }
    }
    return 0;
}

```

Console

```
<terminated> (exit value: 0) Ex_2.exe [C/C++ Application]
Enter an alphabet: i
i is a vowel
```

Ex_3.c

```c
/*
 * Ex_3.c
 *
 *  Created on: Jul 31, 2021
 *      Author: Sarah
 */

#include <stdio.h>

int main(){
    float num, max;
    printf("Enter three numbers: ");
    fflush(stdout);
    scanf("%f", &num);
    max = num;
    for(int i = 1; i < 3; i++){
        scanf("%f", &num);
        if(num > max)
            max = num;
    }
    printf("Largest number = %f", max);
    return 0;
}

```

Console

```
<terminated> (exit value: 0) Ex_3.exe [C/C++ Application]
Enter three numbers: 4 8 1
Largest number = 8.000000
```

Ex_4.c

```c
/*
 * Ex_4.c
 *
 *  Created on: Jul 31, 2021
 *      Author: Sarah
 */

#include <stdio.h>

int main(){
    float num;
    printf("Enter a number: ");
    fflush(stdout);
    scanf("%f", &num);
    if(num > 0)
        printf("%f is positive", num);
    else if(num < 0)
        printf("%f is negative", num);
    else
        printf("You entered zero.");

    return 0;
}

```

Console

```
<terminated> (exit value: 0) Ex_4.exe [C/C++ Application]
Enter a number: -5
-5.000000 is negative
```

Ex_4.c

```c
/*
 * Ex_4.c
 *
 *  Created on: Jul 31, 2021
 *      Author: Sarah
 */

#include <stdio.h>

int main(){
    float num;
    printf("Enter a number: ");
    fflush(stdout);
    scanf("%f", &num);
    if(num > 0)
        printf("%f is positive", num);
    else if(num < 0)
        printf("%f is negative", num);
    else
        printf("You entered zero.");

    return 0;
}

```

Console

```
<terminated> (exit value: 0) Ex_4.exe [C/C++ Application]
Enter a number: 6
6.000000 is positive
```

Ex_4.c

```c
/*
 * Ex_4.c
 *
 *  Created on: Jul 31, 2021
 *      Author: Sarah
 */

#include <stdio.h>

int main(){
    float num;
    printf("Enter a number: ");
    fflush(stdout);
    scanf("%f", &num);
    if(num > 0)
        printf("%f is positive", num);
    else if(num < 0)
        printf("%f is negative", num);
    else
        printf("You entered zero.");

    return 0;
}

```

Console

```
<terminated> (exit value: 0) Ex_4.exe [C/C++ Application]
Enter a number: 0
You entered zero.
```

Ex_5.c

```c
/*
 * Ex_5.c
 *
 *  Created on: Jul 31, 2021
 *      Author: Sarah
 */

#include <stdio.h>

int main(){
    char ch;
    printf("Enter a character: ");
    fflush(stdout);
    scanf("%c", &ch);
    if((ch >= 97 && ch <= 122) || (ch >= 65 && ch <= 90))
        printf("%c is an alphabet", ch);
    else
        printf("%c is not an alphabet", ch);

    return 0;
}

```

Console

```
<terminated> (exit value: 0) Ex_5.exe [C/C++ Application]
Enter a character: 4
4 is not an alphabet
```

Ex_5.c

```c
/*
 * Ex_5.c
 *
 *  Created on: Jul 31, 2021
 *      Author: Sarah
 */

#include <stdio.h>

int main(){
    char ch;
    printf("Enter a character: ");
    fflush(stdout);
    scanf("%c", &ch);
    if((ch >= 97 && ch <= 122) || (ch >= 65 && ch <= 90))
        printf("%c is an alphabet", ch);
    else
        printf("%c is not an alphabet", ch);

    return 0;
}

```

Console

```
<terminated> (exit value: 0) Ex_5.exe [C/C++ Application]
Enter a character: k
k is an alphabet
```

Ex_6.c

```c
/*
 * Ex_6.c
 *
 *  Created on: Jul 31, 2021
 *      Author: Sarah
 */

#include <stdio.h>

int main(){
    int num, sum = 0;
    printf("Enter an integer: ");
    fflush(stdout);
    scanf("%d", &num);
    for(int i = 1; i <= num; i++){
        sum += i;
    }
    printf("Sum  = %d", sum);
    return 0;
}

```

Console

```
<terminated> (exit value: 0) Ex_6.exe [C/C++ Application]
Enter an integer: 60
Sum  = 1830
```

Ex_7.c

```c
/*
 * Ex_7.c
 *
 *  Created on: Jul 31, 2021
 *      Author: Sarah
 */

#include <stdio.h>

int main(){
    int num, fact = 1;
    printf("Enter an integer: ");
    fflush(stdout);
    scanf("%d", &num);
    if(num < 0)
        printf("Error!!! Factorial of negative number doe
    else{
        for(int i = 1; i <= num; i++){
            fact *= i;
        }
        printf("Factorial  = %d", fact);
    }
    return 0;
}

```

Console

<terminated> (exit value: 0) Ex_7.exe [C/C++ Application]

```
Enter an integer: 10
Factorial  = 3628800
```

Ex_8.c

```c
/*
 * Ex_8.c
 *
 *  Created on: Jul 31, 2021
 *      Author: Sarah
 */

#include <stdio.h>

int main(){
    char choice;
    float x, y;
    printf("Enter operator either + or - or * or /: ");
    fflush(stdout);
    scanf("%c", &choice);
    printf("Enter two operands: ");
    fflush(stdout);
    scanf("%f %f", &x, &y);
    switch(choice){
            case '+':{
                printf("%f + %f = %f", x, y, x + y);
                break;
            }
            case '-':{
                printf("%f - %f = %f", x, y, x - y);
                break;
            }
            case '*':{
                printf("%f * %f = %f", x, y, x * y);
                break;
            }
            case '/':{
                printf("%f / %f = %f", x, y, x / y);
                break;
            }
        }
    return 0;
}
```

Console

<terminated> (exit value: 0) Ex_8.exe [C/C++ Application]

```
Enter operator either + or - or * or /: *
Enter two operands: 2 3
2.000000 * 3.000000 = 6.000000
```