



Sadiq Public School

Do the right, fear no man

Subject: Computer Science

Class: S3

Saturday, 16th November, 2024

Lesson: Topic (Programming Exercise) Chapter#5 Functions

A. **Inquiry:** Do you know how to write programs containing functions?

B. **Information:**

A function is a block of code which only runs when it is called.

You can pass data, known as parameters, into a function.

Functions are used to perform certain actions, and they are important for reusing code: Define the code once, and use it many times.

Predefined Functions

So it turns out you already know what a function is. You have been using it the whole time while studying this tutorial!

For example, `main()` is a function, which is used to execute code, and `printf()` is a function; used to output/print text to the screen:

Example

```
int main() {
    printf("Hello World!");
    return 0;
}
```

Create a Function

To create (often referred to as declare) your own function, specify the name of the function, followed by parentheses `()` and curly brackets `{}`:

Syntax

```
void myFunction() {
    // code to be executed
}
```

Example Explained

`myFunction()` is the name of the function

`void` means that the function does not have a return value. You will learn more about return values later in the next chapter

Inside the function (the body), add code that defines what the function should do

Call a Function

Declared functions are not executed immediately. They are "saved for later use", and will be executed when they are called.

To call a function, write the function's name followed by two parentheses `()` and a semicolon `;`

In the following example, `myFunction()` is used to print a text (the action), when it is called:

Example

Inside main, call `myFunction()`:

```
// Create a function
void myFunction() {
    printf("I just got executed!");
}

int main() {
    myFunction(); // call the function
    return 0;
}

// Outputs "I just got executed!"
```

A function can be called multiple times:

Example

```
void myFunction() {
    printf("I just got executed!");
}

int main() {
    myFunction();
    myFunction();
    myFunction();
    return 0;
}

// I just got executed!
// I just got executed!
// I just got executed!
```

C. Synthesizing/absorbing the information.

Write down your own narrative text about creating and calling a function in C language.

Read your text book pages#114 to 117.

- Identifying errors in C programs.
- Writing the outputs of code segments.
- Writing programs containing functions.

Please watch these brief YouTube playlist videos about functions.

<https://www.youtube.com/watch?v=3lqgdqoY83o&list=PLBlNk6fEyqRi0Va6znG73P52rFfXD5fhs>

D. Practising:

1. Write a function to print the table of a number.
2. Write a function to calculate the factorial of a number.
3. Write a function which takes a number as input and displays its digits with spaces in between.

Activity:

Solve all the programming exercise questions on page#117.

Students: Please if you have any questions at all about this topic, any words you didn't understand, anything at all please send me an email and I will reply ASAP.

| Class | Teachers' Names | Teachers' Abbreviations | Teachers' Email Addresses | Instructions |
|--------|------------------------|-------------------------|---------------------------|--|
| S3B | Bilal Mustafa | BMK | bilal.rohaila@gmail.com | S3B students will send their home assignments to their subject teacher (BMK) for checking and getting feedback. |
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