

# UNIVERSIDAD POLITÉCNICA DE YUCATÁN

## Programming 2-A Quizz



### **Professor:**

Carrillo Ruiz Sara Jeannette

### **Students:**

Alpuche Denis Adriel Jesus  
Martin Alpuche Lizandro Emiliano

**Delivery date:** June 18th, 2025

## Part 1: Paradigm Match.

A banking app with customers and accounts (Object-oriented)

A math calculation engine. (functional)

A step-by-step login process. (procedural)

An AI expert system. (logical)

## Part 2: “Write a Mini Program”

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

```
int main()
{
    printf("This is a simple calculator!\n");
    printf("Available operations:\n- addition(1)\n- subtraction(2)\n- multiplication(3)\n");
    printf("Enter your desired operation (type 1-3): ");
    int operation;
    scanf("%d", &operation);

    float num1, num2, result;

    if (operation != 1 & operation != 2 & operation != 3)
    {
        printf("Sorry, invalid operation.\n");
        return 1;
    }

    printf("Enter the two numbers\n");
    printf("Enter number 1: ");
    scanf("%f", &num1);
    printf("Enter number 2: ");
    scanf("%f", &num2);

    if (operation == 1)
    {
        result = num1 + num2;
        printf("Result: %.2lf\n", result);
    }
    else if (operation == 2)
    {
        result = num1 - num2;
        printf("Result: %.2lf\n", result);
    }
    else
    {
        result = num1 * num2;
        printf("Result: %.2lf\n", result);
    }
}
```

```
return 0;
}
```

## Screenshot

```
(base) lizandro@lizandro-ASUS-TUF-Gaming-A15-FA507NU-FA507NU:~/Desktop/solve$ ./program
This is a simple calculator!
Available operations:
- addition(1)
- subtraction(2)
- multiplication(3)
Enter your desired operation (type 1-3): 1
Enter the two numbers
Enter number 1: 123
Enter number 2: 13.231
Result: 136.23
(base) lizandro@lizandro-ASUS-TUF-Gaming-A15-FA507NU-FA507NU:~/Desktop/solve$ ./program
This is a simple calculator!
Available operations:
- addition(1)
- subtraction(2)
- multiplication(3)
Enter your desired operation (type 1-3): 2
Enter the two numbers
Enter number 1: 41
Enter number 2: 12312
Result: -12271.00
(base) lizandro@lizandro-ASUS-TUF-Gaming-A15-FA507NU-FA507NU:~/Desktop/solve$ ./program
This is a simple calculator!
Available operations:
- addition(1)
- subtraction(2)
- multiplication(3)
Enter your desired operation (type 1-3): 3
Enter the two numbers
Enter number 1: -1231
Enter number 2: 593
Result: -729983.00
(base) lizandro@lizandro-ASUS-TUF-Gaming-A15-FA507NU-FA507NU:~/Desktop/solve$ ./program
This is a simple calculator!
Available operations:
- addition(1)
- subtraction(2)
- multiplication(3)
Enter your desired operation (type 1-3): no me gustan las mates
Sorry, invalid opepration.
```

## Part 3: Save your History

### Screenshots:

```
(base) lizandro@lizandro-ASUS-TUF-Gaming-A15-FA507NU-FA507NU:~/Desktop/solve/quizz$ git init
Initialized empty Git repository in /home/lizandro/Desktop/solve/quizz/.git/
(base) lizandro@lizandro-ASUS-TUF-Gaming-A15-FA507NU-FA507NU:~/Desktop/solve/quizz$ ll
total 320
drwxrwxr-x 3 lizandro lizandro 4096 jun 18 11:40 ./
drwxrwxr-x 4 lizandro lizandro 4096 jun 18 11:40 ../
drwxrwxr-x 7 lizandro lizandro 4096 jun 18 11:40 .git/
-rw-rw-r-- 1 lizandro lizandro 313315 jun 18 11:39 Quizz_Programming.pdf
(base) lizandro@lizandro-ASUS-TUF-Gaming-A15-FA507NU-FA507NU:~/Desktop/solve/quizz$ git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   Quizz_Programming.pdf
```

```
(base) lizandro@lizandro-ASUS-TUF-Gaming-A15-FA507NU-FA507NU:~/Desktop/solve/quizz$ git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   Quizz_Programming.pdf

(base) lizandro@lizandro-ASUS-TUF-Gaming-A15-FA507NU-FA507NU:~/Desktop/solve/quizz$ git commit -m "changed grammar error oepration->operation"
[master (root-commit) 7c4e6be] changed grammar error oepration->operation
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 Quizz_Programming.pdf
(base) lizandro@lizandro-ASUS-TUF-Gaming-A15-FA507NU-FA507NU:~/Desktop/solve/quizz$
```

```
(base) lizandro@lizandro-ASUS-TUF-Gaming-A15-FA507NU-FA507NU:~/Desktop/solve/quizz$ git add .
(base) lizandro@lizandro-ASUS-TUF-Gaming-A15-FA507NU-FA507NU:~/Desktop/solve/quizz$ git status
On branch master

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   solve.c

(base) lizandro@lizandro-ASUS-TUF-Gaming-A15-FA507NU-FA507NU:~/Desktop/solve/quizz$ git commit -m "added program file"
[master fd3b73a] added program file
1 file changed, 42 insertions(+)
create mode 100644 solve.c
```

## Git URL:

<https://github.com/Cilantrin/programming-quizz>

Using git avoids conflicts that may appear if the project was being worked on without a version control system. It allows for different users to colab and work together in harmony.

## Part 4: Q&A

### 1. Which paradigm did you choose and why?

We chose the procedural paradigm because it is the one that best aligns with the calculator functionality. You have to follow a series of steps in order to output the result, so that's why.

### 2. Identify one operator and one data type you used.

- “+” Is one of the operators employed for the calculator.
- “float” was a data type used to store the user's numbers.

### 3. What is one benefit of using Git in development?

Git is a specialized tool for version control, this nature allows different coders on a team to work on the same project in an organized manner. This avoids conflicts that may appear if the project was being worked on without a version control system.

### 4. Draw or describe the basic structure of your program.

Begin

- Output available operations.
- Input the user's desired operation (*operation*).
- Input the user's two numbers (*num1*, *num2*).
- Perform the operation with the numbers and store it in *result*.
- Output the result

End

### 5. How would your program look different in another paradigm?

If we had chosen to do the program with the Functional-Paradigm we could have made different functions that took care of very specific tasks, unlike we just did where we stored everything in the `main()` function. We could have written a function for the calculator that asks for the input, calls the necessary operation functions and returns the result in the end. And for the operations, we could have made a different function for addition, subtraction and multiplication respectively, each handling that specific operation.