

PROJECT TITLE:
"CALCULATOR"

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ROLE DISTRIBUTION:

- CODE AND DOCUMENTATION: BAKYTBEEK K. ALINA
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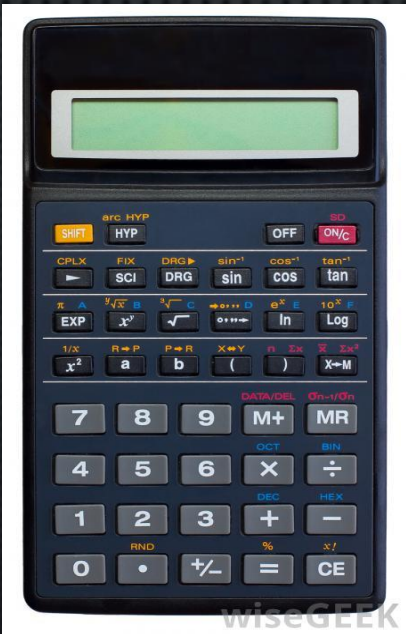
PROJECT GOALS:

- A DEEPER LEARNING OF OOP AND ITS OPERATIONS
- IMPROVING CALCULATOR OPERATIONS
- IMPROVED AND SIMPLIFIED CODE

DESCRIPTION:

- **CALC** IS THE NAME OF THE SPREADSHEET PROGRAM USED IN **OPENOFFICE**.
- A **CALCULATOR** IS AN ELECTRONIC HARDWARE DEVICE OR SOFTWARE CAPABLE OF PERFORMING MATHEMATICAL CALCULATIONS, SUCH AS ADDITION, MULTIPLICATION, SUBTRACTION, OR DIVISION.
- THE CASIO COMPUTER COMPANY DEVELOPED THE FIRST ELECTRONIC CALCULATOR IN 1957. SINCE THEN, CALCULATORS HAVE COME IN MANY SIZES, AND ARE ALSO BUILT INTO MOST OPERATING SYSTEMS ON COMPUTERS, SMARTPHONES, AND TABLETS. THE PICTURE IS AN EXAMPLE OF THE **CALCULATOR** PROGRAM INCLUDED IN EVERY VERSION OF **MICROSOFT WINDOWS**.

THE EVOLUTION OF THE CALCULATOR



PLANNING:

- SINCE THE CALCULATOR IS ONE OF THE MOST IMPORTANT DEVICES OF OUR DEPARTMENT, OUR MAIN IDEA WAS TO CREATE OUR OWN PERSONAL CALCULATOR, USING THE KNOWLEDGE GAINED DURING THESE 2 SEMESTERS.
- THE MAIN REQUIREMENT WAS THE PRE-ESSENTIAL KNOWLEDGE FROM THE SECOND SEMESTER. THEREFORE THE BASIC CONCEPT IS CLASSES AND OBJECTS. CLASS — A TYPE THAT DESCRIBES THE STRUCTURE OF OBJECTS. AN OBJECT IS AN INSTANCE OF A CLASS.

```

class calculator():
    def __init__(self,x,y):
        self.x=x
        self.y=y
    def multiplication(self):
        return self.x*self.y
    def division(self):
        return self.x/self.y
    def add(self):
        return self.x+self.y
    def subtraction(self):
        return self.x-self.y
    def percentage(self):
        return self.x*self.y/100

```

```

x=int(input("Enter first number: "))
y=int(input("Enter second number: "))
object=calculator(x,y)
choice=1
while choice!=0:
    print("0. Exit")
    print("1. Multiplication")
    print("2. Division")
    print("3. Add")
    print("4. Subtraction")
    print("5. Percentage")
    choice=int(input("Enter choice: "))

```

```

    if choice==1:
        print("Result: ",object.multiplication())
    elif choice==2:
        print("Result: ",object.division())
    elif choice==3:
        print("Result: ",object.add())
    elif choice==4:
        print("Result: ",object.subtraction())
    elif choice==5:
        print("Result: ",object.percentage())
    elif choice==0:
        print("Exiting!")
    else:
        print("Invalid choice!!")

print()

```

CODE:

HOW IT WORKS?

- FIRST OF ALL 2 COMMANDS ARE GIVEN:
- FIRST: "SELECT THE FIRST AND SECOND VARIABLE".
- SECOND: AFTER CHOOSING THE VARIABLES, A COMMAND IS SELECTED, EACH OF WHICH HAS A NUMBER.
- IN THIS WAY, WE GET SOLUTIONS TO THE OPERATIONS WE NEED.

TESTING:

```
*Python 3.8.5 Shell*
File Edit Shell Debug Options Window Help
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/user/AppData/Local/Programs/Python/Python38-32/calculator final +.py
Enter first number: 200
Enter second number: 1000
0. Exit
1. Multiplication
2. Division
3. Add
4. Subtraction
5. Percentage
Enter choice:
```

```
Python 3.8.5 Shell
File Edit Shell Debug Options Window Help
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/user/AppData/Local/Programs/Python/Python38-32/calculator final +.py
Enter first number: 200
Enter second number: 1000
0. Exit
1. Multiplication
2. Division
3. Add
4. Subtraction
5. Percentage
Enter choice: 5
Result: 2000.0
0. Exit
1. Multiplication
2. Division
3. Add
4. Subtraction
5. Percentage
Enter choice: 3
Result: 1200
0. Exit
1. Multiplication
2. Division
3. Add
4. Subtraction
5. Percentage
Enter choice: 2
Result: 0.2
0. Exit
1. Multiplication
2. Division
3. Add
4. Subtraction
5. Percentage
Enter choice: 0
Exiting!
>>>
```

IMPLEMENTATION OF OUR IDEA:

- THE GOAL OF OUR PROJECT WAS, FIRST OF ALL, UNDERSTANDING AND ACCESSIBILITY FOR US. FIRST, WE STARTED LEARNING THE CALCULATOR FROM THE PREVIOUS LESSONS AND CAME TO THE DECISION TO CREATE A LIGHTER, BUT NO LESS WORKING CODE. THEN WE STARTED A DEEPER STUDY OF OOP OPERATIONS AND IN THE COURSE OF HARD WORK WE CAME UP WITH AN EXCELLENT CODE FOR THE CALCULATOR.

THANK YOU FOR YOUR
ATTENTION!