User Manual

1. **Total and Average**
    - Input three numbers and calculate their sum and average.
    - Example output:

```
Please input the first number: 50
Please input the second number: 60
Please input the third number: 70
The total of the three numbers is  180 and the average is  60.0
```

2. **Tip and Bill**

    2.1. **Using Variables Only**

    - Enter the total bill and preferred tip percentage.
    - Calculate the tip, convert it to decimal, and display the total bill to be paid.
    - Example output:

```
How much did the meal cost? 3200
Please put how much percentage tip do you want to give? 5
Your tip amount is PHP 160.0 .
Your total bill to pay is PHP 3360.0 . Thank you.
```

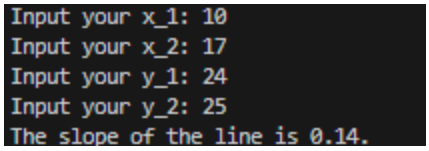
    2.2. **Using Def Function**

    - Same as 2.1 but implemented with a different script (def function).
    - Example output:

```
How much did your meal cost?  5500
Kindly input your tip in percentage. Thank you.  10
Your tip amount is PHP 550.0 . Your total bill to pay is PHP 6050.0 . Thank you.
```

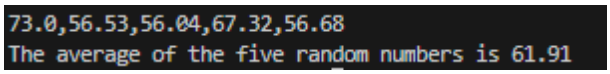
3. **Slope of the Line**

- Input four values: x1, x2, y1, and y2.
- Calculate the slope of the line based on these values.
- Example output:



4. **Random Decimal**

- Generate five random decimal numbers and calculate their average.
- Display the numbers and their average.
- Example output:



5. **Digit Finder**

- Input an exponent for 2^n and the number of last digits to display.
- Display the last one and two digits, then the specified maximum last digits along with the actual value.
- Example output:

```
Kindly input your desired power in 2^n: 24
What is the maximum number of last digits do you want to find? 7
A.)The last digit when 2 is raised to 24 is 6
B.)The last two digits when 2 is raised to 24 is 16
C.)The last 7 digits when 2 is raised to 24 is 6777216
The value of 2^ 24 is  16777216
```

6. **Name and Print**

- Input a name and the number of times to display it.
- Use a for loop to print the name the specified number of times.
- Example output:

```
What is your name? Juan
How many times do you want it to be printed? 5
Juan
Juan
Juan
Juan
Juan
```

7. **Fibonacci**

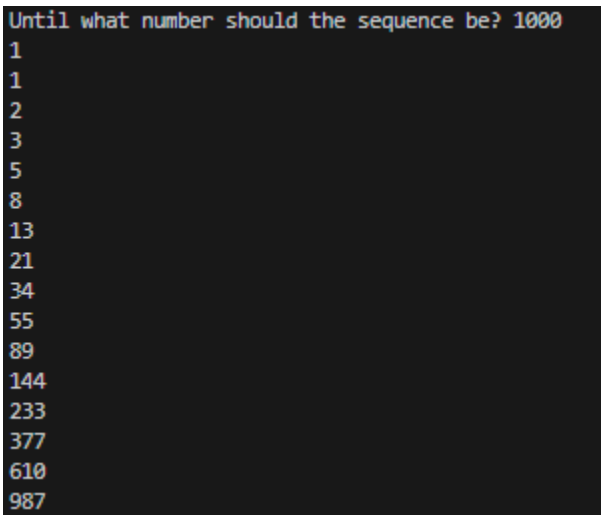
7.1. **Using For Loop**

- Input the total number of Fibonacci sequence elements to display.
- Use a for loop to generate and display the sequence.
- Example output:

```
How many Fibonacci numbers do you want in the sequence? 10
1
1
2
3
5
8
13
21
34
55
```

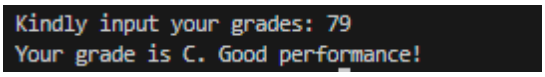
7.2. **Using While Loop**

- Input a number and display the Fibonacci sequence until it's less than or equal to the input.
- Example output:



8. **Grade Conversion**

- Simple if-else statements for grade conversion.
- Example output:



9. Guessing Game

- Guess a number between 1-20 within three attempts.
- Prompt guides the user with hints if their guess is higher or lower.
- Example output:

```
This program is a guessing game! There are only 3 chances to play this game.
Type your guess number between 1 and 20: 15
Oops wrong!Too low! Please try again.
Type your guess number between 1 and 20: 18
Oops wrong!Too high! Please try again.
Type your guess number between 1 and 20: 16

Congratulations, You got it!
The number is 16
```

10. **Multiplication Game**

- Answer 10 multiplication questions with integers between 1-10.
- Prompt displays if the answer is correct and provide a total score.
- Example output:

```
Question 1: 8 x 2 = 16
Right!
Question 2: 10 x 2 = 20
Right!
Question 3: 10 x 10 = 100
Right!
Question 4: 7 x 2 = 14
Right!
Question 5: 3 x 5 = 15
Right!
Question 6: 4 x 1 = 2
Wrong! The answer is 4.
Question 7: 4 x 10 = 2
Wrong! The answer is 40.
Question 8: 7 x 5 = 3
Wrong! The answer is 35.
Question 9: 10 x 2 = 5
Wrong! The answer is 20.
Question 10: 9 x 10 = 1
Wrong! The answer is 90.

You've got 5/10
```

11. **Elapsed Time**

- Input initial time, determine whether morning or evening, and the preferred elapsed time.
- Code calculates and displays the time after the elapsed time.
- Example output:

```
Enter hour: 10
am (1) or pm (2)? 1
How many hours ahead? 2
New Hour: 12nn
```

12. **Password Checker**

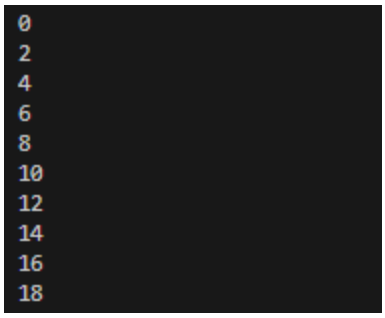
- Simple login system with password input and five attempts.
- Default password is *password12345*.
- Example output:

```
                    Welcome, user
Type your password: 123
Incorrect password. You have  4  attempts left.
Type your password: 5
Incorrect password. You have  3  attempts left.
Type your password: password12345

Logged in succesfully.
```

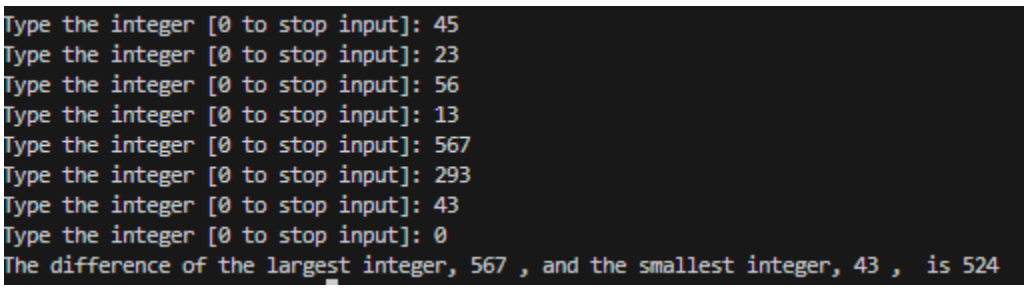
13. **Even Numbers**

- Display even numbers up to 100 using a while loop.
- Example output:



14. **Largest and Smallest**

- Input integers until desired and identify the largest and smallest numbers.
- Code displays the difference between them.
- Example output:



15. **List & Calculate**

- Input integers into a list until desired.
- Display the count, sum, mean, and the list itself.
- Example output:

```
Type the integer [type 0 to stop]: 34
Type the integer [type 0 to stop]: 2
Type the integer [type 0 to stop]: 5
Type the integer [type 0 to stop]: 7
Type the integer [type 0 to stop]: 45
Type the integer [type 0 to stop]: 343
Type the integer [type 0 to stop]: 12
Type the integer [type 0 to stop]: 0
count: 7
sum: 448
mean: 64.0
list:  [34, 2, 5, 7, 45, 343, 12]
```

16. **Rock Paper Scissors**

- Play a simple game of rock-paper-scissors with a score counter.
- Example output:

```
How many rounds do you want to play? 3
Type your choice between ROCK, PAPER, or SCISSORS: (use only capital letters) PAPER
Computer chose SCISSORS.
Computer wins.
Type your choice between ROCK, PAPER, or SCISSORS: (use only capital letters) ROCK
Computer chose PAPER.
Computer wins.
Type your choice between ROCK, PAPER, or SCISSORS: (use only capital letters) PAPER
Computer chose ROCK.
Player wins.

You won 1/3 matches.
```

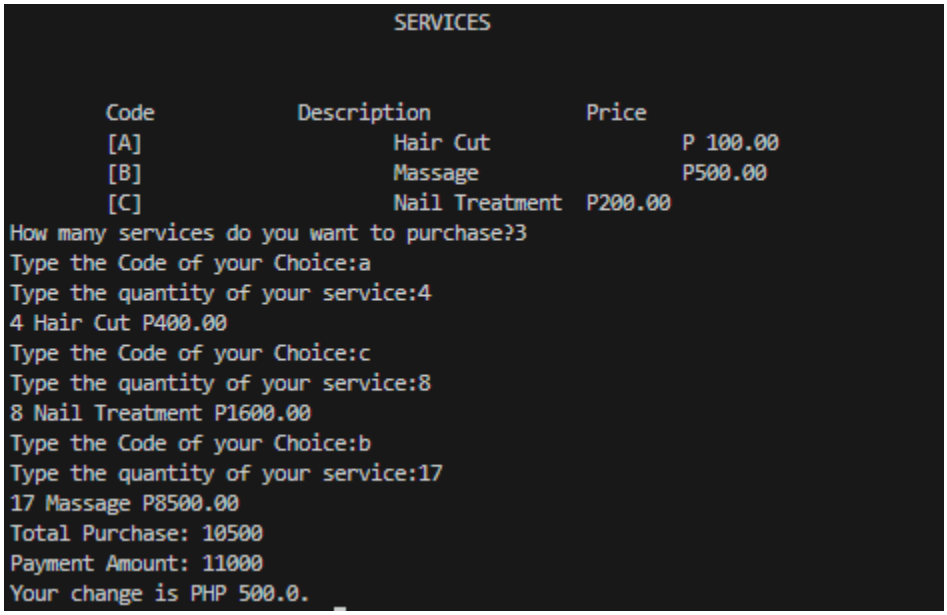
17. **Factorial**

- Input a positive integer and calculate its factorial.
- Example output:

```
Enter a positive integer: 9
9 ! = 362880
```

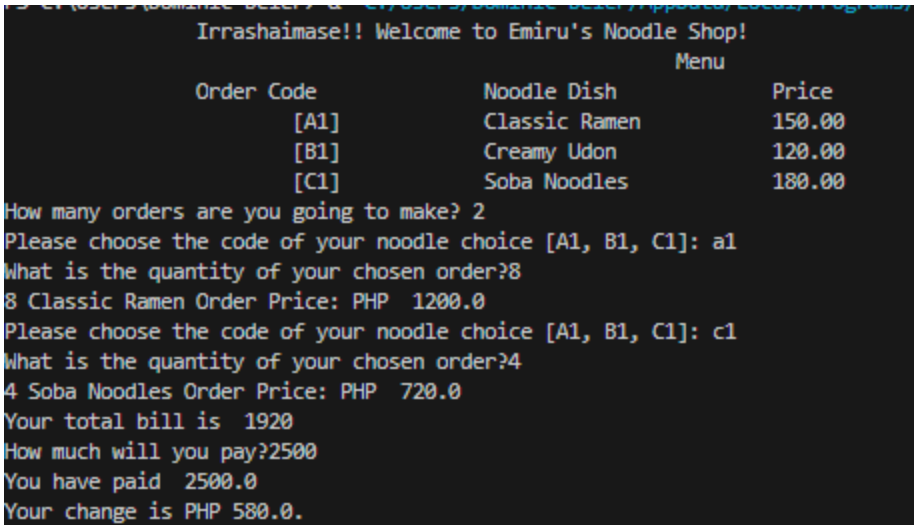
18. **Practical 1**

- Calculate the total bill for multiple services with for loops and if-else statements.
- Example output:



19. **Practical 2**

- Calculate the total bill for multiple food items ordered.
- Example output:



20. **Midterm - Perfect Number Checker**

- Determine if the input is a perfect number using nested while, if-else, and for loops.
- Example output: