**Reflective Journal**

**Basic Software Design Principle**

* Keep it simple :This principle is used in the programs,

Where I define scopes of the program that how I will implement it and make it easy for another user to read. And functions are created to make the program look good. Also in future if any modification is done, we can simply call in the function if it needed further in the program.

Used different scenarios to make the code and run flexible.

### YAGNI – “you aren’t gonna need it”: Here I haven’t coded something that needed in the future; I only coded the features and task which were mentioned in the assessment.

### Avoid Premature Optimisation: Here we cannot where a program’s bottlenecks will be until after the fact. We can only guess this but cannot predict it.

### Refactor, refactor, and refactor: It is normal to rewrite the code again and again until the required requirement and features are achieved.

**10th March 2023**

Here I have learned how to use If-elif statements which I implemented in the main program.

We have been assigned different activities on canvas which we have to be completed. We took assistance from tutor, lab assistant and had discussion with class fellows. For leanings we explore canvas learning and w3schools python tutorial website.

1. In the very first program, I learn how to use print and input function. After running the program it is showing the user to input his name, year of birth and current age. I have learned about print and input function.
2. In the second, sleep calculator program- I have learned how to calculate sleep hours in a year is on an average a person is sleeping 7 hours. When user will run the program, it will ask for birth year and the program will show **current** age. If user enters any other value- it will show value error.
3. In third program, I have learned how to check if one variable is greater than another. I have taken two variable here- a and b. and using if else condition verified if the condition is true or not.
4. In the fourth program which was Chinese zodiac program, and will print the animal name according to the year. Here I learn new logic about how to use if and elif statement for all other animals’ name. and use the logic (zodiac year – 2000) % 12
5. Another program is for earthquake magnitude in which the range is given for different magnitude levels and it will show if the earthquake level is minor, moderate and strong (depending on the range), the range is float value and here also I learn about if elif statement.
6. In the last program, it is for checking sound level, here also if elif statement is used and the level value is given between 70 - 130. Different devices are assigned to the value. For jackhammer- range is >=130, for lawnmower range is between – 106-130, for alarm clock the range is between 70-106, and of quiet place it is between 40-70. I have used if and elif statement to execute different conditions.

**23rd March 2023**

Activities were assigned to explore and complete the task. We took the learning’s from w3schools python tutorial and also took the guidance from tutor, lab assistant and class fellow.

* I have learn how to code in python and how to perform basic function of add and subtract two variables from user input.
* Also creating the list and adding the sum of the list in the end. Also came across the len() method.

Len() method – return the length of the given list.

Sum() id used to add the number given in the list.

* Also learned how the multiple the numbers in the list. This is done by multiplying each element in the loop using for loop
* Also learned how to print one text multiple times using while loop and saving the text iteration variable x and the text to another variable y and using while loop print the text multiple times.

**5th April 2023**

Here different activities were assigned to us and we learned creation of list and how to select common elements from the list, how to shuffle my list. Also how to check the length of the words in the list filled with set of strings.

In the end, it was great leaning to know about basic and advance concept of python which will help us to implement it in future in the development sector.