

1- Make sure the user is entering a right input

```
import msvcrt
import sys

user_input_buffer = []

while True:
    char = msvcrt.getch().decode('utf-8')

    if char.isdigit():
        user_input_buffer.append(char)
        sys.stdout.write(char)
        sys.stdout.flush() # Ensure immediate display
    elif char == '\r':
        try:
            user_input = int(''.join(user_input_buffer))
            print("\nYou entered:", user_input)
            break
        except ValueError:
            print("\nInvalid input. Please enter a valid integer.")
            user_input_buffer = []
    else:
        print("Invalid input. Please enter only digits.")
        user_input_buffer = []
```

2- Difference between OOD and Class Diagram?

Object-Oriented Design (OOD):

Object-Oriented Design (OOD) is a broader software development methodology that focuses on designing software systems using the principles of object-oriented programming (OOP). OOD encompasses the entire process of designing software, including defining the structure, behavior, and interactions of objects within the system. It involves high-level design decisions, such as defining classes, their responsibilities, and relationships, as well as designing the overall architecture of the system. OOD emphasizes concepts like encapsulation, inheritance, polymorphism, and abstraction to model the real-world entities and their interactions.

Class Diagram:

A Class Diagram, on the other hand, is a specific type of diagram used in OOD and UML (Unified Modeling Language) to illustrate the structure of a software system at a more detailed level. It is a visual representation of the classes, their attributes (properties), methods (functions), and the relationships between classes in a system. Class diagrams help in documenting the design of the software, making it easier to understand and communicate the structure of the system. Class diagrams are a static view of the system, meaning they focus on the relationships between classes and their properties, but they don't capture dynamic behavior or interactions.

Differences:

OOD is a broader design methodology that encompasses the entire software design process, including high-level design decisions, while a Class Diagram is a specific visual representation used within OOD to depict the static structure of classes and their relationships. OOD is a design approach, while a Class Diagram is a visual tool or notation for documenting and communicating aspects of the design. OOD focuses on the overall design of the software, including defining objects, their responsibilities, and system architecture, whereas Class Diagrams specifically illustrate class structures and associations. Class Diagrams are just one component of OOD, used to represent part of the design in a graphical format. Object-Oriented Design is the process of designing software systems using OOP principles,

Task 3: Read from word file

```
import docx2txt
my_text = docx2txt.process("text.docx")
print(my_text)
```

Task 4: Choose a specific line to write into

```
import fileinput

file_path = 'osos.txt'
line_number_to_insert = int(input("Enter the number of the line to modify: "))
new_line = input("Enter your new line: ") + '\n'

with fileinput.FileInput(file_path, inplace=True, backup='.bak') as file:
    for current_line_number, line in enumerate(file, 1):
        if current_line_number == line_number_to_insert:
            print(new_line, end='')
            print(line, end='')

print("File has been updated.")
```