

9.ACTIVITY

9. Optimize previously written programs by using modular programming approach

➤ **Modular Approach in Programming:**

Modular programming is the process of subdividing a computer program into separate sub-programs. A module is a separate software component. It can often be used in a variety of applications and functions with other components of the system.

- Some programs might have thousands or millions of lines and to manage such programs it becomes quite difficult as there might be too many of syntax errors or logical errors present in the program, so to manage such type of programs concept of **modular programming** approached.
- Each sub-module contains something necessary to execute only one aspect of the desired functionality.
- Modular programming emphasis on breaking of large programs into small problems to increase the maintainability, readability of the code and to make the program handy to make any changes in future or to correct the errors.

➤ **Points which should be taken care of prior to modular program development:**

1. Limitations of each and every module should be decided.
2. In which way a program is to be partitioned into different modules.
3. Communication among different modules of the code for proper execution of the entire program.

➤ **Advantages of Using Modular Programming Approach :**

1. **Ease of Use** :This approach allows simplicity, as rather than focusing on the entire thousands and millions of lines code in one go we can access it in the form of modules. This allows ease in debugging the code and prone to less error.
2. **Reusability** :It allows the user to reuse the functionality with a different interface without typing the whole program again.

3. **Ease of Maintenance** : It helps in less collision at the time of working on modules, helping a team to work with proper collaboration while working on a large application.

➤ **Types of Modular programming:**

- Abductive logic.
- Answer set.
- Concurrent logic.
- Functional logic.
- Inductive logic.

➤ **Modular approach in programming:**

Modular programming is a **software design technique that emphasizes separating the functionality of a program into independent, interchangeable modules**, such that each contains everything necessary to execute only one aspect of the desired functionality.