



## Exercise 19

### Do While Loops

#### Tasks:

1. A home maintenance company provides services by sending workers to their client's premises. After a job is marked as completed, the maintenance company contacts the client to ensure the work is completed to their satisfaction. If the client responds with dissatisfaction, the team is sent to the client's premises again, and the whole process is repeated. This process is repeated until the client is satisfied. Write a program to implement this functional requirement.
2. Design a C++ program to assist Police field agents in marking down which homes they have visited in a locality while searching for a suspect. Your program should ask the user to enter the starting house number and the ending house number to sequentially iterate through all the house numbers to be visited. If the suspect is found at any point, the loop should break and the search should end. Write a C++ program using a 'do-while' loop and a 'break' statement to achieve this functionality.
3. Design a speeding violation system that can be installed in a traffic warden's radar equipment. Write a C++ program that repeatedly inputs each passing car's license plate number, and processes its speed to check for any speeding violation. If the car has a government number plate (license plates starting with 'G'), then all subsequent checks are ignored. For all other regular cars, the speed of the car is taken as input from the warden. If the speed is within a grace limit of  $\pm 20$  km/h from the defined speed limit, then there is no fine. If the car is speeding faster than this grace limit, apply a fine of Rs. 5000. If the car is slower than this grace limit, apply a fine of Rs. 2000. Your program should use a constant integer to store the speed limit of 120 as part of its configuration variables.