"STREAMLINING HOTEL MANAGEMENT: A C++ SYSTEM FOR RESERVATIONS, CHECK-INS, AND MORE"

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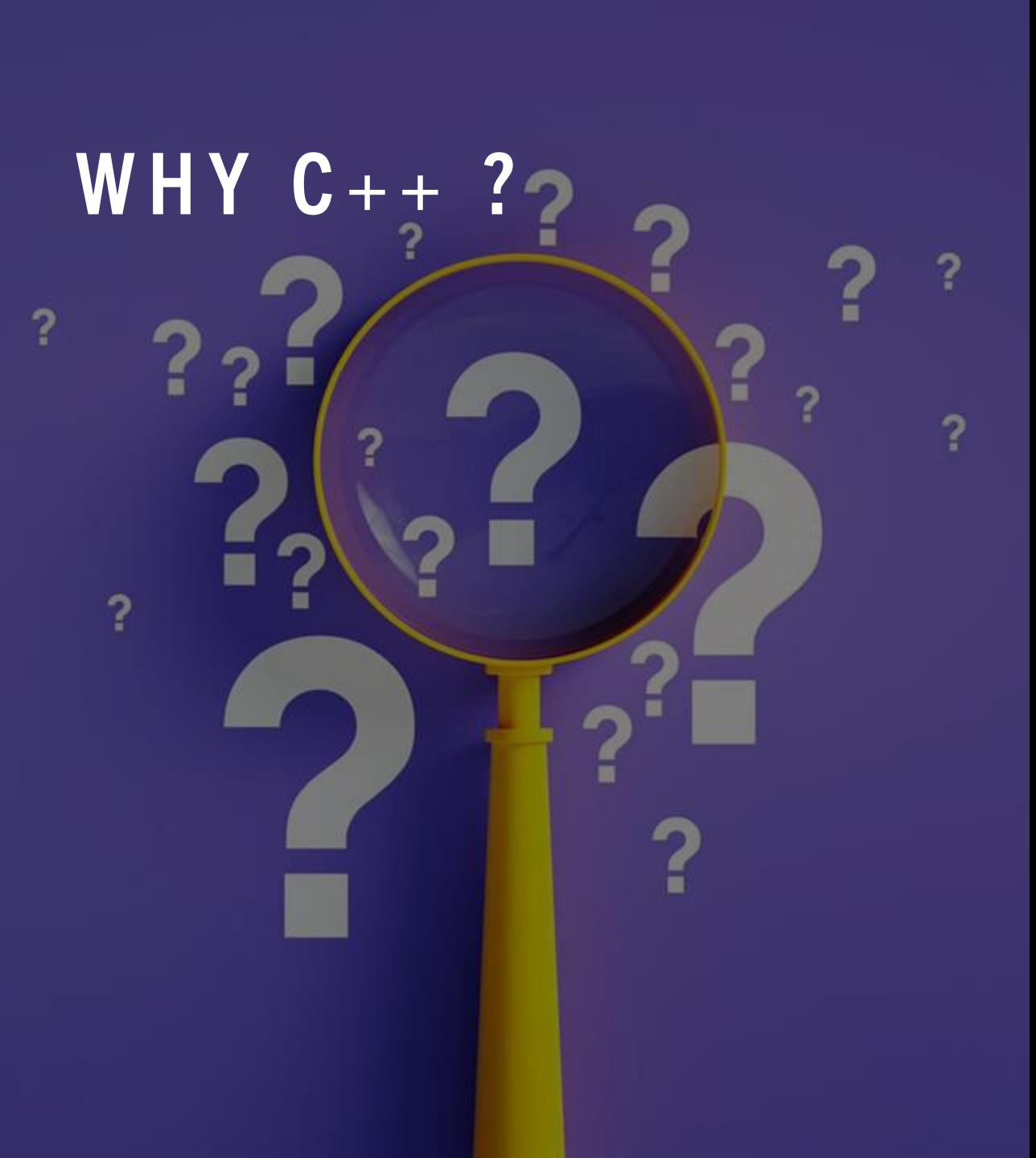
OVERVIEW:

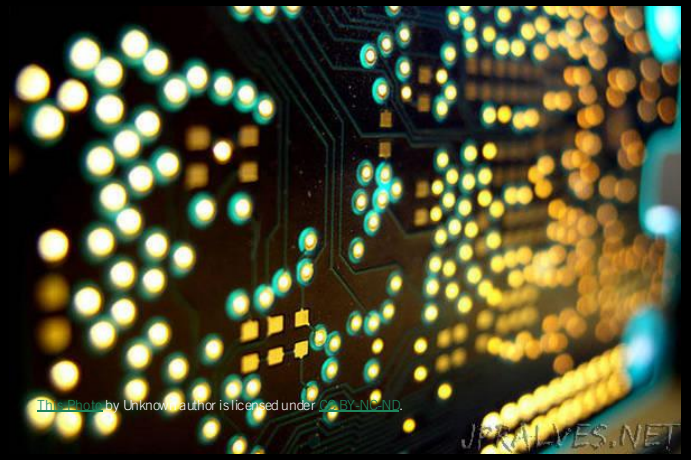
Hotel management can be a complex and time-consuming process, but with the right tools, it doesn't have to be. In this presentation, we'll discuss how we created a Hotel Management System using the C++ programming language. Our system includes features such as room management, guest check-in and check-out, and invoicing. We'll show you how our system works, from the user interface to the code structure, and explain the data storage methods we used.

WHY C++ ?



- Performance : Faster execution of program.
- Object-Oriented Programming : Maintains program in an organized way.
- Portability : Can be compiled and run on different platforms.
- Easier implementation of File handling.
- Flexibility and so on...

ADVANTAGES OF USING LINKED LIST OVER OTHER DATA STRUCTURE IN OUR PROJECT



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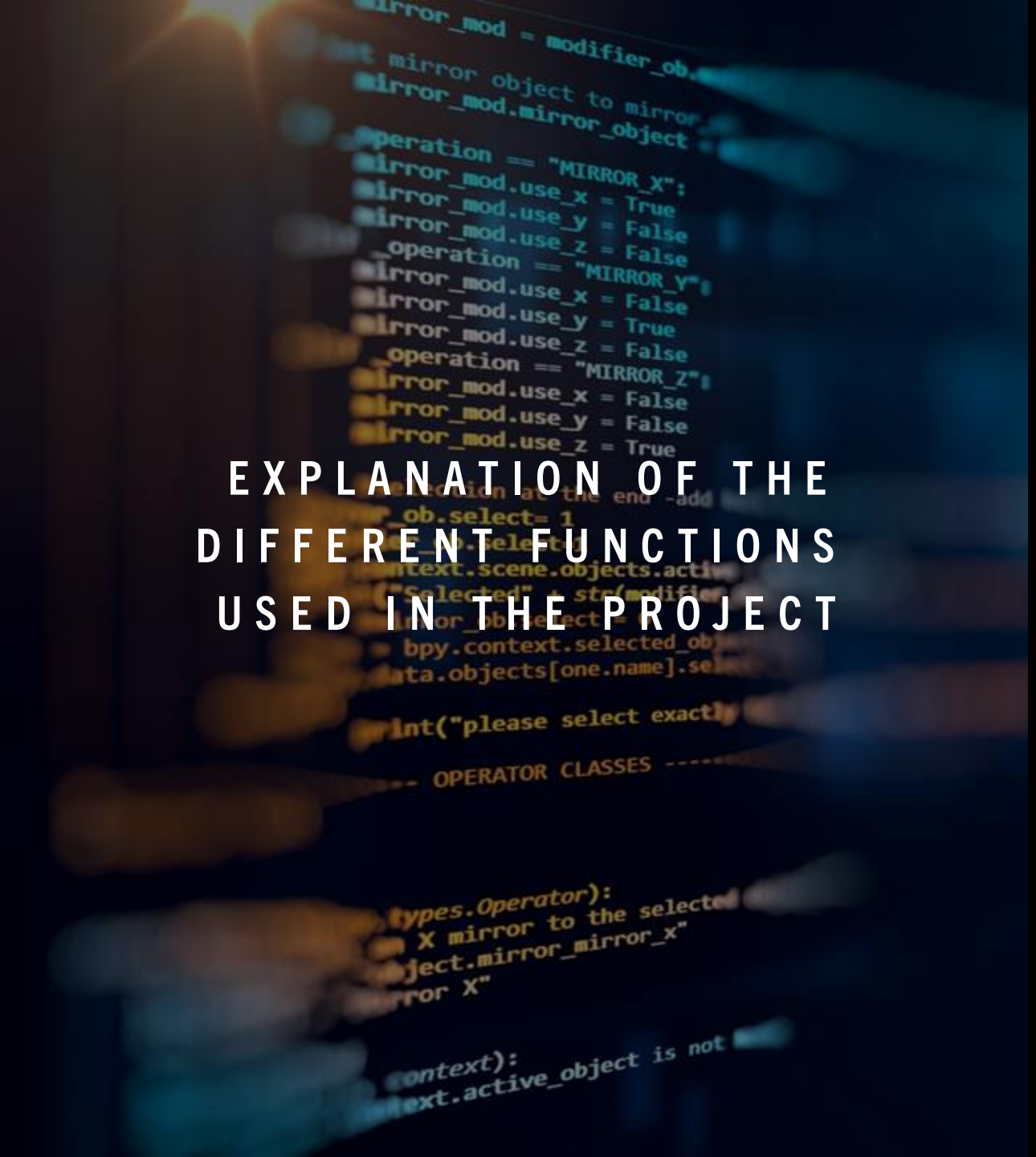
- Dynamic Size
- Efficient Insertion and Deletion
- Memory Efficient
- Implementation of Stacks and Queues
- Easy to Traverse

FEATURES OF THE PROJECT

- *Room Management*
- *Customer Management*
- *Search*
- *Deletion*
- *Billing Management*
- *Updating the Customer's Details*



EXPLANATION OF THE DIFFERENT FUNCTIONS USED IN THE PROJECT

- **menu()** function :

  - ✓ Displays the options available to the user and prompts the user to choose one.

  - ✓ Based on the user's choice, the corresponding function is called to perform the desired operation.

EXPLANATION OF THE DIFFERENT FUNCTION USED IN THE PROJECT

- **insert()** function:
  - ✓ allows the user to insert a new room into the hotel record.
  - ✓ asks the user to enter the room ID, customer name, allocated date, room type, and number of nights.
  - ✓ The cost of the room is calculated based on the room type and the number of nights stayed.
  - ✓ stores this information in a binary file named "Customer_Details.txt" and also adds the information to a linked list of rooms.

EXPLANATION OF THE DIFFERENT FUNCTION USED IN THE PROJECT

- **search()** function:
  - ✓ allows the user to search for a room based on its ID
  - ✓ displays the details of the room if it is found

EXPLANATION OF THE DIFFERENT FUNCTION USED IN THE PROJECT

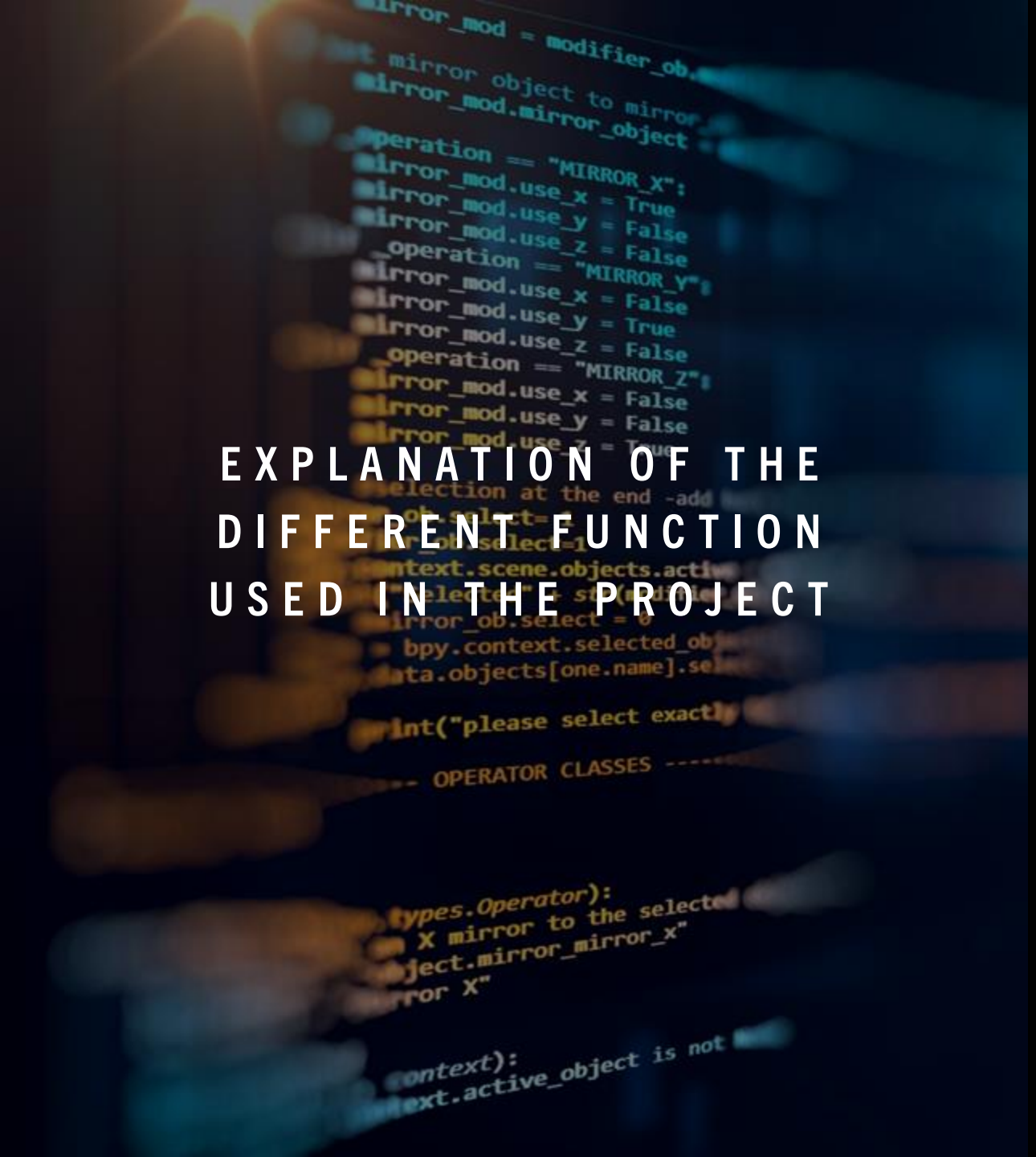
- **`Update()`** function:
  - allows the user to update the details of a room based on its ID.

EXPLANATION OF THE DIFFERENT FUNCTION USED IN THE PROJECT

- **`del()`** function:
  - allows the user to delete a room based on its ID.

EXPLANATION OF THE DIFFERENT FUNCTION USED IN THE PROJECT

- **`show()`** function:
  - displays the details of all the rooms in the hotel.



EXPLANATION OF THE DIFFERENT FUNCTION USED IN THE PROJECT

- **`prompt()`** function:
  - function prompts the user to enter the details of a room

EXPLANATION OF THE DIFFERENT FUNCTION USED IN THE PROJECT

- **`display()`** function:
  - function displays the details of all the updated records in the hotel

DEMO

FUTURE SCOPE OF THE PROJECT

User Interface Improvements

Performance Optimization

Mobile Application Development

Reservation System

Feedback System

AI-based recommendation systems

THANK YOU!!!