**Hotel Management System**

**DSA Concepts used in Hotel management project**

**Arrays (roomsArray):**

This is a data structure that allows for fast random access to elements. In this code, it is used to store Room objects, providing constant-time access to rooms based on their indices.

**Linked Lists (roomsList):**

This is a dynamic data structure where elements are stored in nodes, and each node points to the next one. In this code, it is used to manage rooms. When a new room is added, a pointer to that room is added to the linked list.

**Queue (BookingQueue):**

A queue is a First-In-First-Out (FIFO) data structure. In this code, it's used to manage reservations. When a reservation is made, it's added to the back of the queue (reservations.push(reservation)), and when a reservation is canceled, it's removed from the front of the queue (reservations.pop()).

**Character Arrays (char name[50]):**

These are used to store names of guests, events, and the hotel. strcpy is used to copy strings. The use of character arrays in this context is a basic representation of string handling in C++.

**reservations.push(reservation):**

This is an enqueue operation, adding a reservation to the back of the queue.

**reservations.pop():**

This is a dequeue operation, removing the front reservation from the queue.