



CHRIST
(DEEMED TO BE UNIVERSITY)
B A N G A L O R E • I N D I A

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JAVA – PROGRAMMING

```
import java.util.HashMap;
import java.util.Map;
import java.util.Random;
import java.util.Scanner;
// Generic class Booking
class Booking<T> {
    private T bookingDetails;
    public Booking(T bookingDetails) {
        this.bookingDetails = bookingDetails;
    }
    public T getBookingDetails() {
        return bookingDetails;
    }
    public void setBookingDetails(T bookingDetails) {
        this.bookingDetails = bookingDetails;
    }
}
// Generic interface for BookingService
interface BookingService<T> {
    void makeBooking(T bookingDetails);
```

```
T getBookingDetails(int bookingId);
}

// TurfBookingDetails class representing details of a turf booking
class TurfBookingDetails {
    private String turfName;
    private int numOfMalePlayers;
    private int numOfFemalePlayers;
    private double totalAmount;

    public TurfBookingDetails(String turfName, int numOfMalePlayers, int numOfFemalePlayers, double
totalAmount) {
        this.turfName = turfName;
        this.numOfMalePlayers = numOfMalePlayers;
        this.numOfFemalePlayers = numOfFemalePlayers;
        this.totalAmount = totalAmount;
    }

    public String getTurfName() {
        return turfName;
    }

    public int getNumOfMalePlayers() {
        return numOfMalePlayers;
    }

    public int getNumOfFemalePlayers() {
        return numOfFemalePlayers;
    }

    public double getTotalAmount() {
        return totalAmount;
    }
}

// TurfBookingService implementing BookingService for Turf Bookings
class TurfBookingService implements BookingService<TurfBookingDetails> {
    private Map<Integer, TurfBookingDetails> turfBookings; // Simulating bookings with IDs
```

```

public TurfBookingService() {
    this.turfBookings = new HashMap<>();
}

@Override
public void makeBooking(TurfBookingDetails bookingDetails) {
    // Simulating a booking and assigning a unique ID
    int bookingId = generateUniqueId();
    turfBookings.put(bookingId, bookingDetails);
    System.out.println("Turf Booking made with ID: " + bookingId);
}

@Override
public TurfBookingDetails getBookingDetails(int bookingId) {
    return turfBookings.get(bookingId);
}

// Other methods specific to Turf bookings can be added here
// Helper method to generate unique IDs (for simulation purposes)
private int generateUniqueId() {
    // Logic to generate unique IDs
    return new Random().nextInt(1000);
}
}

public class Mainlab6 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter name of the turf: ");

        String turfName = scanner.nextLine();

        System.out.print("Enter number of male players: ");

        int numOfMalePlayers = scanner.nextInt();

        System.out.print("Enter number of female players: ");

        int numOfFemalePlayers = scanner.nextInt();
    }
}

```

```

        System.out.print("Enter total amount for the booking: ");

        double totalAmount = scanner.nextDouble();

    // Creating TurfBookingDetails object with user input

        TurfBookingDetails userBookingDetails = new TurfBookingDetails(turfName, numOfMalePlayers,
numOfFemalePlayers, totalAmount);

    // Creating an instance of TurfBookingService

        TurfBookingService turfBookingService = new TurfBookingService();

    // Making a turf booking with user input details

        turfBookingService.makeBooking(userBookingDetails);

    // Getting booking details

        System.out.print("Enter booking ID to retrieve details: ");

        int bookingId = scanner.nextInt();

        scanner.nextLine(); // Consume newline character

TurfBookingDetails bookingDetails = turfBookingService.getBookingDetails(bookingId);

        if (bookingDetails != null) {

            System.out.println("Booking Details for ID " + bookingId + ":");

            System.out.println("Turf Name: " + bookingDetails.getTurfName());

            System.out.println("Number of Male Players: " + bookingDetails.getNumOfMalePlayers());

            System.out.println("Number of Female Players: " + bookingDetails.getNumOfFemalePlayers());

            System.out.println("Total Amount: " + bookingDetails.getTotalAmount());

        } else {

            System.out.println("No booking found for ID: " + bookingId);

        }

scanner.close();

    }

}

```

```

Enter name of the turf: smilan
Enter number of male players: 2
Enter number of female players: 2
Enter total amount for the booking: 200
Turf Booking made with ID: 740
Enter booking ID to retrieve details: 740
Booking Details for ID 740:
Turf Name: smilan
Number of Male Players: 2
Number of Female Players: 2
Total Amount: 200.0
PS D:\TRIMESTER-02\ADVANCE JAVA>

```