

Dart Program: Variables, Lists, and Maps

```
import 'dart:io';

void main() {
  // Step 1: Declare and initialize 3 different types of variables
  int year = 2025;
  String course = 'Dart Programming';
  bool isBeginner = true;

  print('Year: \${year}');
  print('Course: \${course}');
  print('Is Beginner: \${isBeginner}\n');

  // Step 2: Accept user input for name and age
  stdout.write('Enter your name: ');
  String? name = stdin.readLineSync();

  stdout.write('Enter your age: ');
  String? ageInput = stdin.readLineSync();
  int age = int.tryParse(ageInput ?? '0') ?? 0;

  print('\nHello, \${name}! You are \${age} years old.\n');

  // Step 3: List of 5 city names
  List<String> cities = ['Lahore', 'Karachi', 'Islamabad', 'Peshawar', 'Quetta'];
  print('Cities List (Original): \${cities}');
  print('Cities List (Reversed): \${cities.reversed.toList()}\n');

  // Step 4: Map of 3 students with marks
  Map<String, int> studentMarks = {
    'Ali': 85,
    'Sara': 92,
    'Ahmed': 78,
  };

  // Add a new entry
  studentMarks['Zainab'] = 88;
  print('Updated Student Marks: \${studentMarks}\n');

  // Step 5: Conditional logic to determine age group
  String category = (age >= 60)
    ? 'Senior'
    : (age >= 20)
    ? 'Adult'
    : (age >= 13)
    ? 'Teen'
    : 'Child';

  print('\${name} is categorized as: \${category}');
}
```