BCA Optimized Notes by Yash

Semester IV - Dart Programs

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Unit 1 - Chapter 2

1) Basics

Code

```
void main() {
     int var1 = 10;
     double var2 = 0.2;
     bool var3 = false;
     string var4 = "0", var5 = "SYBCA - Dart";
     print(var1);
     print(var2);
     print(var3);
     print(var4);
     print(var5);
}
```

Output

```
10
0.2
false
0
SYBCA - Dart
```

2) Arithmetic Operations

Code

```
void main() {
     int var1 = 20;
     int var2 = 10;
     print(var1 + var2);
     print(var1 - var2);
     print(var1 * var2);
     print(var1 / var2);
     print(var1 % var2);
}
```

Output

```
30
10
200
2.0
0
```

3) Map

First Method

```
void main() {
     var data = {"class":"SYBCA", "stream":"CS", "college":"SK
Somaiya College"};
     print(data);
     print(data["college"]);
     print(data["class"]);
     data["location"] = "Vidyavihar";
```

```
    print(data);
    print(data["location"]);
}
```

Output

```
{class: SYBCA, stream: CS, college: SK Somaiya College}
SK Somaiya College
SYBCA
{class: SYBCA, stream: CS, college: SK Somaiya College, location: Vidyavihar}
Vidyavihar
```

Second Method

```
void main() {
    var data = new Map();
    data["college"] = "SK Somaiya College";
    data["class"] = "SYBCA";
    data["stream"] = "CS";
    print(data);
    print(data["class"]);
}
```

Output

```
{college: SK Somaiya College, class: SYBCA, stream: CS}
SYBCA
```

4) Fixed Length List

Code

```
void main() {
    List? data = List.filled(5, null, growable:false);
    data[0] = "SK";
    data[1] = "Somaiya";
    data[2] = "College";
    data[3] = "Vidyavihar";
    print(data);
    print(data[2]);
}
```

Output

```
[SK, Somaiya, College, Vidyavihar, null]
College
```

5) Growable List

Code

```
void main() {
    var college = ["SK Somaiya", "College"];
    print(college);
    college.add("CS");
    print(college);
    college.addAll(["Vidyavihar", "East"]);
    print(college);
    college.insert(1, "University");
    print(college);
```

```
     college.insertAll(1, ["SY", "BCA"]);
     print(college);
     print(college[1]);
}
```

Output

```
[SK Somaiya, College]
[SK Somaiya, College, CS]
[SK Somaiya, College, CS, Vidyavihar, East]
[SK Somaiya, University, College, CS, Vidyavihar, East]
[SK Somaiya, SY, BCA, University, College, CS, Vidyavihar, East]
SY
```

6) Sets

Code

```
void main() {
     var college = <String>{"Hello students"};
     print("Value in set is: $college");
     college.add("Welcome to SK Somaiya College");
     print("Value in set is: $college");
     var stream_name = {"CS", "IT", "BMS"};
     college.addAll(stream_name);
     print("Value in set is: $college");
     var college1 = college.elementAt(0);
     print("Element at index 0 is: $college1");
     int l = college.length;
     print("The length is: $l");
     bool check = college.contains("CS");
     print("$check");
     college.remove("Hello students");
     print("$college");
     print("Using forEach");
     college.forEach((element) {
          if(element == "IT") {
               print("Found");
          }
          else {
               print("Not Found");
          }
     });
     college.clear();
     print("$college");
}
```

Output

```
Value in set is: {Hello students}
Value in set is: {Hello students, Welcome to SK Somaiya College}
Value in set is: {Hello students, Welcome to SK Somaiya College, CS, IT, BMS}
Element at index 0 is: Hello students
The length is: 5
true
{Welcome to SK Somaiya College, CS, IT, BMS}
Using forEach
Not Found
Not Found
Found
Not Found
{}
```

7) Records

Code

```
void main() {
     var record = ("first", a:2, b:true, "last");
     print(record.$1);
     print(record.a);
     print(record.b);
     print(record.$2);
}
```

Output

```
first
2
true
last
```

8) Map

Code

```
void main() {
     var college = {"stream":"CS", "degree":"BCA", "college":"SK
Somaiya"};
     print(college);
     print(college["stream"]);
     print(college[0]);
     college["address"] = "Welcome to";
     print(college);
     var college2 = {"location": "Vidyavihar " "East"};
     print(college2);
     print(college2["location"]);
}
```

Output

```
{stream: CS, degree: BCA, college: SK Somaiya}
CS
null
{stream: CS, degree: BCA, college: SK Somaiya, address: Welcome to}
{location: Vidyavihar East}
Vidyavihar East
```