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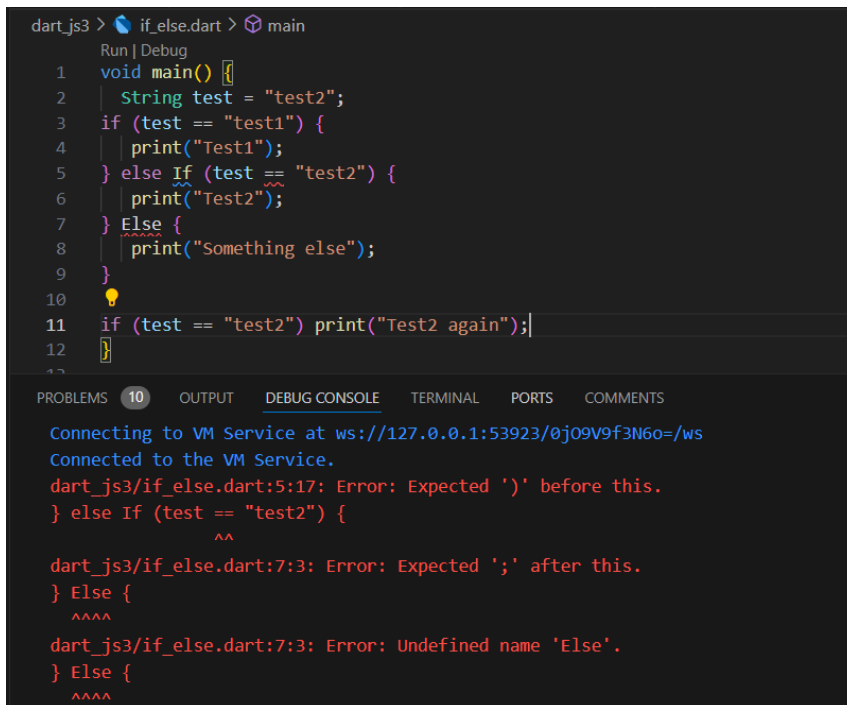
Kelas : TI-3A/20

NIM : 2241720217

Jobsheet 3 Pemrograman Mobile

Praktikum 1: Menerapkan Control Flows ("if/else")

1.



```
dart_js3 > if_else.dart > main
Run | Debug
1 void main() {
2   String test = "test2";
3   if (test == "test1") {
4     print("Test1");
5   } else If (test == "test2") {
6     print("Test2");
7   } Else {
8     print("Something else");
9   }
10
11 if (test == "test2") print("Test2 again");
12 }
```

PROBLEMS 10 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

Connecting to VM Service at ws://127.0.0.1:53923/0j09V9f3N6o=/ws
Connected to the VM Service.
dart_js3/if_else.dart:5:17: Error: Expected ')' before this.
} else If (test == "test2") {
 ^^
dart_js3/if_else.dart:7:3: Error: Expected ';' after this.
} Else {
 ^^^^^
dart_js3/if_else.dart:7:3: Error: Undefined name 'Else'.
} Else {
 ^^^^^

2. Apabila menjalankan kode di atas, akan menghasilkan error seperti di atas. Error terjadi karena pada kondisi else if, ada kesalahan penulisan pada kata kunci If. Seharusnya ditulis **else if** (semuanya huruf kecil), bukan else If. Begitu pula dengan kondisi Else, yang harus ditulis **else**, bukan Else.

Kode yang benar :

```
dart_js3 > if_else.dart > main
Run | Debug
1 void main() {
2   String test = "test2";
3   if (test == "test1") {
4     print("Test1");
5   } else if (test == "test2") {
6     print("Test2");
7   } else {
8     print("Something else");
9   }
10
11   if (test == "test2") print("Test2 again");
12 }
```

PROBLEMS 6 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

Connecting to VM Service at ws://127.0.0.1:54005/476x82c3zfc=/ws
Connected to the VM Service.
Test2
Test2 again

Exited.

3.

```
dart_js3 > if_else.dart > main
Run | Debug
1 void main() {
2   String test = "test2";
3   if (test == "test1") {
4     print("Test1");
5   } else if (test == "test2") {
6     print("Test2");
7   } else {
8     print("Something else");
9   }
10
11   if (test == "test2") print("Test2 again");
12
13   String test = "true";
14   if (test == "true") {
15     print("Kebenaran");
16   }
17 }
18
```

PROBLEMS 8 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

Connecting to VM Service at ws://127.0.0.1:53861/ZUHieZaXMFQ=/ws
Connected to the VM Service.
dart_js3/if_else.dart:13:10: Error: 'test' is already declared in this scope.
 String test = "true";
 ^^^^^
dart_js3/if_else.dart:2:10: Context: Previous declaration of 'test'.
 String test = "test2";
 ^^^^^

Exited (254).

Akan terjadi error, karena Di dalam main() function, variabel test dideklarasikan dua kali, yaitu sebagai String test = "test2"; dan sebagai String test = "true";. Deklarasi ulang variabel dengan nama yang sama di dalam blok kode yang sama akan menyebabkan error karena bahasa pemrograman Dart tidak mengizinkan variabel yang sama dideklarasikan lebih dari sekali dalam satu scope.

Berikut adalah perbaikan kodenya:

```
dart.js3 > if_else.dart > main
Run | Debug
1 void main() {
2   String test = "test2";
3   if (test == "test1") {
4     print("Test1");
5   } else if (test == "test2") {
6     print("Test2");
7   } else {
8     print("Something else");
9   }
10
11   if (test == "test2") print("Test2 again");
12
13   String test2 = "true";
14   if (test2 == "true") {
15     print("Kebenaran");
16   }
17 }
18

PROBLEMS 6 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
Connecting to VM Service at ws://127.0.0.1:53891/si6xLfEb7_k=/ws
Connected to the VM Service.
Test2
Test2 again
Kebenaran
Exited.
```

Praktikum 2: Menerapkan Perulangan "while" dan "do-while"

1.

```
dart.js3 > do_while.dart > main
Run | Debug
1 void main() {
2   while (counter < 33) {
3     print(counter);
4     counter++;
5   }
6 }

PROBLEMS 9 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
Connecting to VM Service at ws://127.0.0.1:54151/rQB0f_NnhrM=/ws
dart.js3/do_while.dart:2:10: Error: Undefined name 'counter'.
  while (counter < 33) {
        ^^^^^^^
dart.js3/do_while.dart:3:11: Error: Undefined name 'counter'.
    print(counter);
          ^^^^^^^
dart.js3/do_while.dart:4:5: Error: Getter not found: 'counter'.
    counter++;
    ^^^^^^^
```

2. Akan terjadi error, karena Pada kode di atas, variabel counter langsung digunakan tanpa ada deklarasi awal. Sehingga akan menghasilkan error undefined name 'counter' karena variabel tersebut tidak dikenal oleh Dart.

Kode yang benar :

```
dart_js3 > do_while.dart > main
Run | Debug
1 void main() {
2   var counter = 0;
3   while (counter < 33) {
4     print(counter);
5     counter++;
6   }
7 }
```

PROBLEMS 6 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

Connecting to VM Service at ws://127.0.0.1:54950/HzwaSEukjVo=/ws
Connected to the VM Service.

0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

3.

```
dart_js3 > do_while.dart > main
Run | Debug
1 void main() {
2   var counter = 0;
3   while (counter < 33) {
4     print(counter);
5     counter++;
6   }
7
8   do {
9     print(counter);
10    counter++;
11  } while (counter < 77);
12 }
13
```

PROBLEMS 6 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76

Exited.

Kode di atas sudah benar dan bisa dijalankan, karena semua sintaks dan struktur loop sudah benar.

Praktikum 3: Menerapkan Perulangan "for" dan "break-continue"

1.

```
dart_js3 > for_break_continue.dart > ...
Run | Debug
1 void main() {
2   for (Index = 10; index < 27; index) {
3     print(Index);
4   }
5 }
6

PROBLEMS 10 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
Connecting to VM Service at ws://127.0.0.1:57044/Wc3Z2MRVCBI=/ws
Connected to the VM Service.
dart_js3/for_break_continue.dart:2:20: Error: Undefined name 'index'.
  for (Index = 10; index < 27; index) {
                        ^^^^^
dart_js3/for_break_continue.dart:3:9: Error: Undefined name 'Index'.
    print(Index);
          ^^^^^
dart_js3/for_break_continue.dart:2:32: Error: Undefined name 'index'.
  for (Index = 10; index < 27; index) {
                                ^^^^^
dart_js3/for_break_continue.dart:2:8: Error: Setter not found: 'Index'.
  for (Index = 10; index < 27; index) {
      ^^^^^
Exited (254).
```

2. Apabila menjalankan kode di atas, akan menghasilkan error seperti di atas. Error terjadi karena Variabel Index di dalam for loop ditulis dengan huruf kapital (I besar), namun di bagian syarat (`index < 27`) menggunakan huruf kecil (`index`), sehingga ada perbedaan dalam penulisan variabel. Lalu, di dalam for loop, bagian terakhir yang seharusnya melakukan penambahan (`index++`) hilang. Tanpa ini, nilai index akan terjadi infinite loop. Dan juga variabel Index harus dideklarasikan dengan tipe datanya, yaitu integer (`int`).

Kode yang benar:

```
dart.js3 > for_break_continue.dart > ...
Run | Debug
1 void main() {
2   for (int index = 10; index < 27; index++) {
3     print(index);
4   }
5 }
6
7

PROBLEMS 6 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
Connecting to VM Service at ws://127.0.0.1:55836/3yDZFCOPX1I=/ws
Connected to the VM Service.
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

Exited.
```

3.

```
dart.js3 > for_break_continue.dart > main
Run | Debug
1 void main() {
2   for (int index = 10; index < 27; index++) {
3     print(index);
4   }
5
6   If (Index == 21) break;
7   Else If (index > 1 || index < 7) continue;
8   print(index);
9 }
10

PROBLEMS 14 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
Connecting to VM Service at ws://127.0.0.1:55947/4P1qobtqTp4=/ws
Connected to the VM Service.
dart.js3/for_break_continue.dart:6:7: Error: Undefined name 'Index'.
  If (Index == 21) break;
    ^^^^^

dart.js3/for_break_continue.dart:6:3: Error: Method not found: 'If'.
  If (Index == 21) break;
  ^^

dart.js3/for_break_continue.dart:6:18: Error: Expected ';' after this.
  If (Index == 21) break;
    ^

dart.js3/for_break_continue.dart:7:3: Error: 'Else' isn't a type.
  Else If (index > 1 || index < 7) continue;
  ^^^^^

dart.js3/for_break_continue.dart:6:3: Error: Local variable 'If' can't be referenced before it is declared.
  If (Index == 21) break;
  ^^

dart.js3/for_break_continue.dart:7:8: Context: This is the declaration of the variable 'If'.
  Else If (index > 1 || index < 7) continue;
  ^^

dart.js3/for_break_continue.dart:7:8: Error: Expected ';' after this.
  Else If (index > 1 || index < 7) continue;
    ^
```

Akan terjadi error, karena pada kondisi else if, ada kesalahan penulisan pada kata kunci Else If. Seharusnya ditulis **else if** (semuanya huruf kecil), bukan Else If. Begitu pula dengan kondisi If, yang harus ditulis **if**, bukan If. Selain itu, Di dalam blok if, variabel Index ditulis dengan huruf besar (I kapital). Padahal, di awal loop, variabel index menggunakan huruf kecil. Lalu, Kondisi `index > 1 || index < 7` secara logis tidak relevan, karena kondisi ini akan selalu **true** untuk hampir semua angka yang mungkin dilalui loop. Sehingga, saya ingin merubah logika tersebut menjadi `index > 1 && index < 7`.

Kode yang benar:

```
dart_js3 > for_break_continue.dart > main
Run | Debug
1 void main() {
2   for (int index = 1; index < 27; index++) {
3
4     if (index == 21) {
5       break;
6     }
7
8     else if (index > 1 && index < 7) {
9       continue;
10    }
11
12    print(index);
13  }
14 }
15
```

PROBLEMS 6 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

Connecting to VM Service at ws://127.0.0.1:56819/5MJkfN2vKkQ=/ws
Connected to the VM Service.

1
7
8
9
10
11
12
13
14
15
16
17
18
19
20