**Lab 4**

LIST

// 1) How do you declare an empty list in Dart?

|  |
| --- |
| void main(){  List lst = List.filled(4, null);  } |

// 2) How do you access elements in a Dart list?

|  |
| --- |
| void main(){  List lst = List.filled(4, null);  print(lst);  } |

// 3) Explain how to add an element to the end of a Dart list

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| --- |
| void main() {  List tst = [ 'One', 'Two' , 'Three' ] ;  print(tst);  print(tst[0]);  tst.add( 'Four' );  print(tst);  } |

// 4) How do you remove an element from a specific index in a Dart list?

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| void main() {  List tst = [ 'One', 'Two' , 'Three' ] ;  print(tst);  tst.removeAt(1);  print(tst);  } |

// 5) What is the length property of a Dart list?

|  |
| --- |
| void main() {  List tst = [ 'One', 'Two' , 'Three' ] ;  print(tst);  print(tst.length);  } |

MAP

// 1) How do you declare an empty list in Dart?

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| --- |
| import 'dart:io';  void main() {  dynamic mapType = {};  print(mapType);  } |

// 2) Provide an example of initializing a map with key-value pairs

|  |
| --- |
| import 'dart:io';  void main() {  dynamic mapType = new Map();  mapType['First'] = 'University';  mapType['Second'] = 'of';  mapType['Third'] = 'Lahore';  print(mapType);  } |

// 3) How do you access elements in a Dart list?

|  |
| --- |
| import 'dart:io';  void main() {  dynamic mapType = new Map();  mapType['First'] = 'University';  mapType['Second'] = 'of';  mapType['Third'] = 'Lahore';  print(mapType);  } |

// 4) Explain how to add a new key-value pair to a Dart map.

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| --- |
| import 'dart:io';  void main() {  dynamic mapType = new Map();  mapType['First'] = 'University';  mapType['Second'] = 'of';  mapType['Third'] = 'Lahore';  print(mapType);  mapType['New'] = 'Addition';  print(mapType);  } |

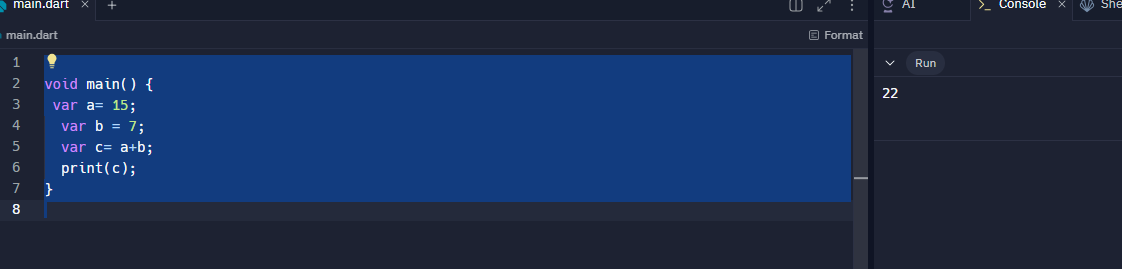
\\ 5) What is the length property of a Dart map?

|  |
| --- |
| import 'dart:io';  void main() {  dynamic mapType = new Map();  mapType['First'] = 'University';  mapType['Second'] = 'of';  mapType['Third'] = 'Lahore';  print(mapType);  print(mapType.length);  } |

**Variables**

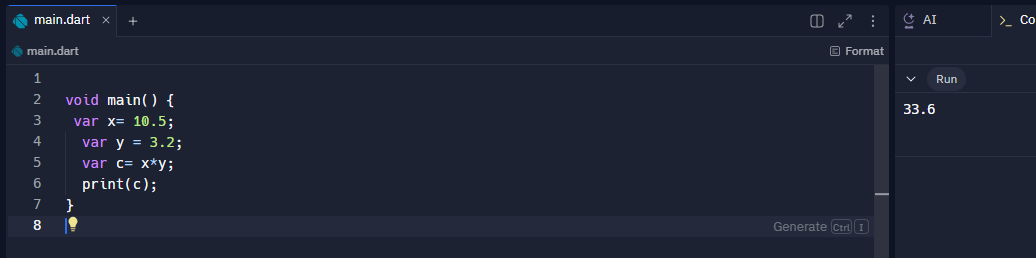
**Q1) Declare two variables, a and b, with values 15 and 7 respectively. Print their sum.**

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| --- |
| void main() {  var a= 15;  var b = 7;  var c= a+b;  print(c);  } |



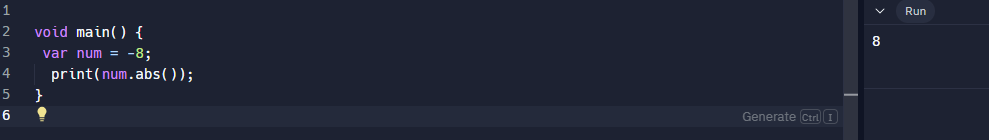
**2) Declare two variables, x and y, with values 10.5 and 3.2 respectively. Print their product.**

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| --- |
| void main() {  var x= 10.5;  var y = 3.2;  var c= x\*y;  print(c);  } |



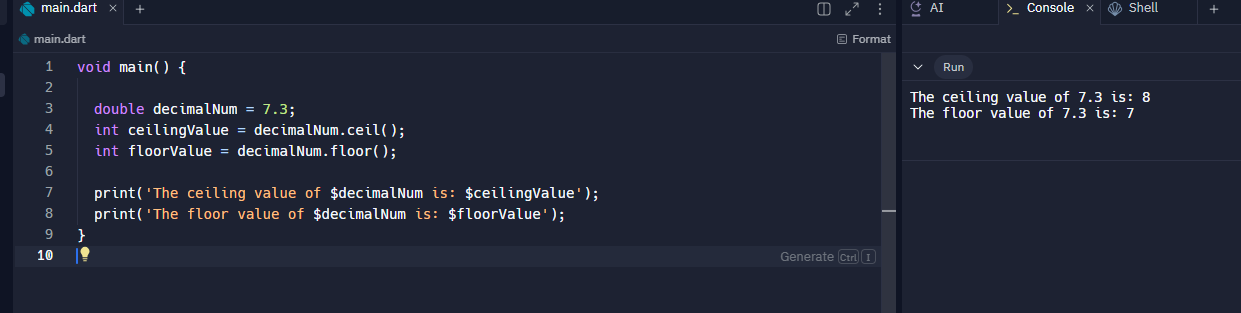
**3) Declare a variable num with a value of -8. Print its absolute value**

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| --- |
| void main() {  var num = -8;  print(num.abs());  } |



**4) Declare a variable decimalNum with a value of 7.3. Print its ceiling and floor values.**

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| --- |
| void main() {    double decimalNum = 7.3;  int ceilingValue = decimalNum.ceil();  int floorValue = decimalNum.floor();  print('The ceiling value of $decimalNum is: $ceilingValue');  print('The floor value of $decimalNum is: $floorValue');  } |



**5) Compare the values of a and b. Print whether a is greater than b.**

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| --- |
| void main() {  var a = 8;  var b= 12;  if (a > b) {  print('a ($a) is greater than b ($b)');  } else if (a < b) {  print('a ($a) is not greater than b ($b)');  } else {  print('a ($a) is equal to b ($b)');  }  } |

