Topic 2 Dart Programming

For Loops

```
for (initial_count_value; termination-condition; step) {
   //statements
}
```

```
void main() {

   var num = 5;

   var factorial = 1;



   for( var i = num ; i >= 1; i-- ) {

      factorial *= i ;

   }

   print(factorial);

}
```

for-in Loop

```
for (variablename in object){
   statement or block to execute
}
```

```
  var obj = [12,13,14];



   for (var prop in obj) {

      print(prop);

   }
```

while Loop

```
var num = 5;
```

```
   var factorial = 1;



   while(num >=1) {

      factorial = factorial * num;

      num--;

   }

   print("The factorial  is ${factorial}");
```

```
The factorial is 120
```

do while Loop

```
do {
   Statement(s) to be executed;
} while (expression);
```

```
var n = 10;

   do {

      print(n);

      n--;

   }

   while(n>=0);
```

```
10
9
8
7
6
5
4
3
2
1
0
```

Break Statement

```
var i = 1;

   while(i<=10) {

      if (i % 5 == 0) {

         print("The first multiple of 5  between 1 and 10 is : ${i}");
```

```
      break ;
      //exit the loop if the first multiple is found
    }
    i++;
  }
```

```
The first multiple of 5 between 1 and 10 is: 5
```

continue Statement

```
var num = 0;
  var count = 0;

  for(num = 0;num<=20;num++) {
    if (num % 2==0) {
      continue;
    }
    count++;
  }
  print(" The count of odd values between 0 and 20 is: ${count}")
```

```
The count of odd values between 0 and 20 is: 10
```

Decision Making
If Statement

```
if(boolean_expression){
  // statement(s) will execute if the boolean expression is true.
}

void main() {
  var  num=5;
  if (num>0) {
    print("number is positive");
```

```
    }

}
```

If Else Statement

```
if(boolean_expression){
   // statement(s) will execute if the Boolean expression is true.
} else {
   // statement(s) will execute if the Boolean expression is false.
}
```

```
void main() {

   var num = 12;

   if (num % 2==0) {

      print("Even");

   } else {

      print("Odd");

   }

}
```

If Else Statement

```
if (boolean_expression1) {
   //statements if the expression1 evaluates to true
}
else if (boolean_expression2) {
   //statements if the expression2 evaluates to true
}
else {
   //statements if both expression1 and expression2 result to false
}
```

```
void main() {

   var num = 2;

   if(num > 0) {

      print("${num} is positive");
```

```
   }
   else if(num < 0) {
      print("${num} is negative");
   } else {
      print("${num} is neither positive nor negative");
   }
}
```

Switch Case Statement

```
switch(variable_expression) {
   case constant_expr1: {
      // statements;
   }
   break;

   case constant_expr2: {
      //statements;
   }
   break;

   default: {
      //statements;
   }
   break;
}
```

```
var grade = "A";

   switch(grade) {
```

```
    case "A": {  print("Excellent"); }
    break;

    case "B": {  print("Good"); }
    break;

    case "C": {  print("Fair"); }
    break;

    case "D": {  print("Poor"); }
    break;

    default: { print("Invalid choice"); }
    break;
}
```