Assignment # 03

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Source Code

```
// 1. Solve all the 2nd assignment's questions using function.
void checkQuadrant(int x, int y) {
// Conditions:
// 1. Take the XY coordinate and determine in which quadrant the
coordinate point lies.
  if (x > 0 && y > 0) {
    print("Coordinate Point of X and Y is $x and $y lies in First Quadrant");
  } else if (x < 0 && y > 0) {
    print("Coordinate Point of X and Y is $x and $y lies in Second
Quadrant");
  } else if (x < 0 && y < 0) {
    print("Coordinate Point of X and Y is $x and $y lies in Third Quadrant");
  } else if (x > 0 && y < 0) {
    print("Coordinate Point of X and Y is $x and $y lies in Fourth Quadrant");
  }
}

void checkMaxNum(int a, int b, int c) {
// 2. Take three numbers and find a maximum between three numbers.
  if (a > b && a > c) {
    print("$a is the Maximum Number");
  } else if (b > a && b > c) {
    print("$b is the Maximum Number");
  } else {
    print("$c is the Maximum Number");
  }
}
```

```
// Loop:
void printTable(int table) {
// 1. Print the multiplication table of a number till 10.
// Example: 2 x 1 = 2
  for (int i = 1; i <= 10; i++) {
    int value = table * i;
    print("$table x $i = $value");
  }
}

void sumOddNum() {
// 2. Calculate the sum of first 20 Odd numbers.
  int sum = 0;
  for (int j = 1; j <= 19; j = j + 2) {
    sum = sum + j;
  }
  print("The Sum of first 20 Odd numbers is $sum");
}

void factorial(int facNum) {
// 3. Calculate the factorial of a number.
// Example: Factorial of 5 is 120.
// Explanation: 1*2*3*4*5 = 120
  int factorial = 1;
  for (int k = 1; k <= facNum; k++) {
    factorial = factorial * k;
  }
  print("The Factorial of a Number $facNum is $factorial");
}

void checkNumPrime(int number) {
// 4. Check if the given number is prime or composite.
  for (int y = 2; y <= number / y; y++) {
    if (number % y == 0) {
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      print("$number is a Composite");
      break;
    } else {
      print("$number is a Prime");
    }
  }
}

// 2. Create a function with named parameters for first name, last name,
and age. Print a
// formatted string using these parameters.
(String, String, int) collectUserData(
    String fristName, String lastName, int age) {
  return (fristName, lastName, age);
}

// 3. Create a function to check if the string is a palindrome or not. Function
should
// return boolean value.
bool checkStringPalindrome(String value) {
  for (int i = 0; i < value.length / 2; i++) {
    if (value[i] != value[(value.length - 1) - i]) {
      return false;
    }
  }
  return true;
}

void main() {
  // 1. Solve all the 2nd assignment's questions using function.
  checkQuadrant(8, -9);
  checkMaxNum(5, 8, 4);
  printTable(14);
  sumOddNum();
  factorial(4);
```

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  checkNumPrime(16);

// 2. Create a function with named parameters for first name, last name, and age. Print a
// formatted string using these parameters.
  String firstName, lastName;
  int age;
  (firstName, lastName, age) = collectUserData("Kashan", "Malik", 19);
  print("Name: $firstName $lastName, Age: $age");

// 3. Create a function to check if the string is a palindrome or not. Function should
// return boolean value.
  bool value = checkStringPalindrome("rotor");
  print(value);
}
```

Output

```
Coordinate Point of X and Y is 8 and -9 lies in Fourth Quadrant

8 is the Maximum Number

14 x 1 = 14
14 x 2 = 28
14 x 3 = 42
14 x 4 = 56
14 x 5 = 70
14 x 6 = 84
14 x 7 = 98
14 x 8 = 112
```

```
14 x 9 = 126
14 x 10 = 140

The Sum of first 20 Odd numbers is 100

The Factorial of a Number 4 is 24

16 is a Composite

Name: Kashan Malik, Age: 19

true
```