

Assignment 2

Conditions and Loops

1. Take N as input. If the number is prime, print “Prime” otherwise print “Not Prime”.

2. Take N as input. Print all prime numbers from 2 to N.

3. Take N as input. Calculate and print its reverse. Ex: 3247 will output 7423.

HINT: To get the last digit of 1234, you can get its remainder when divided by 10... (1234 % 10 = 4). Now divide 1234 by 10 to get 123 (integer division). And so on.

HINT: Given digits 4, 3, 2, 1, you can combine them back into a number. Start with 4. Multiply by 10 to get 40 and add 3 to get 43. Multiply by 10 to get 430 and add 2 to get 432. And so on.

4. Take N as input. Print the sum of its odd placed digits and sum of its even placed digits.

5. Take N as input. Print all Fibonacci numbers less than N.

HINT: Fibonacci is a series that starts with 0 and 1. Each of the following numbers is the sum of the previous 2 numbers. 0, 1, 1, 2, 3, 5, 8, 13, 21...

6. Take N as input. Print Nth Fibonacci number. 0 is the 0th Fibonacci number and 1 is 1st Fibonacci number.

7. Take N (number of rows), print the following pattern (for N = 4)

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

8. Take N (number of rows), print the following pattern (for N = 5)

```
1
2 2
3 0 3
4 0 0 4
5 0 0 0 5
```

9. Take N (number of rows), print the following pattern (for N = 6)

```
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1
```

HINT: This is Pascal's triangle. Each item is a Binomial coefficient.

10. Take N (number of rows), print the following pattern (for N = 4)

```
0
1 1
2 3 5
8 13 21 34
```

HINT: These are Fibonacci numbers.

11. Take N (number of rows), print the following pattern (for N = 5)

```
  *
 * * *
* * * * *
 * * *
  *
```

12. Take N (number of rows), print the following pattern (for N = 5)

```
* * * * *
* *      * *
*          *
* *      * *
* * * * *
```

13. Take N (number of rows), print the following pattern (for N = 4)

```
  1
 2 3 2
```

3 4 5 4 3
4 5 6 7 6 5 4

14. Take N (number of rows), print the following pattern (for N = 3)

1
2 3 2
3 4 5 4 3
2 3 2
1

15. Take N (number of rows), print the following pattern (for N = 4)

1 1
1 2 2 1
1 2 3 3 2 1
1 2 3 4 3 2 1