

## NATIONAL UNIVERSITY

# OF COMPUTER & EMERGING SCIENCES PESHAWAR CAMPUS



Problem Set: Assignment: EX01 Semester: Fall 2017

**Points**: See autograder

Date Set:See autograderDue Date:See autograderCourse:CS101 Introduction to ComputingInstructor:Dr. Nauman

## 1 Sum of Diagonals on a Spiral

Since you are reading this, you have already downloaded and extracted the zip file.

#### 1.1 Tasks to do

- 1. This is an extra credit assignment. So, it will have only a little information in the main file. We do have an extra "hint" file but please only look at that if you are absolutely stuck.
- 2. Take a look at the following spiral:

21 22 23 24 25 20 7 8 9 10 19 6 1 2 11 18 5 4 3 12 17 16 15 14 13

It is constructed from the center and the numbers are placed in a spiral going clock-wise. This particular spiral shown in the figure is a  $5 \times 5$  spiral. We are interested in the sum of numbers on its diagonal (marked in bold red). In this case, the sum is 101.

You need to write a function  $get_diag_sum$  that takes in one input, n, and finds the sum of terms on the diagonal of an  $n \times n$  such spiral. For example, if we pass in the number 5, the function should return 101 and if we pass in 3 as input, it should return 25.

### 3. Notes:

(a) The function only works on odd numbered integers. For all other types of numbers, it should return 'None'.