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ROLL NO. : 62

```
def forEvenNumber(n):
    x= [[(n * y) + x + 1 for x in range(n)] for y in range(n)]
    for i in range(0, n // 4):
        for j in range(0, n // 4):
            x[i][j] = (n * n + 1) - x[i][j];
    for i in range(0, n // 4):
        for j in range(3 * (n // 4), n):
            x[i][j] = (n * n + 1) - x[i][j];
    for i in range(3 * (n // 4), n):
        for j in range(0, n // 4):
            x[i][j] = (n * n + 1) - x[i][j];
    for i in range(3 * (n // 4), n):
        for j in range(3 * (n // 4), n):
            x[i][j] = (n * n + 1) - x[i][j];
    for i in range(n // 4, 3 * (n // 4)):
        for j in range(n // 4, 3 * (n // 4)):
            x[i][j] = (n * n + 1) - x[i][j];
    print("\nSum of all row, column and diagonals = ",
          n * (n * n + 1) // 2, "\n")
    for i in range(n):
        for j in range(n):
            print('%2d ' % (x[i][j]), end=" ")
        print()

def forOddNumber(n):
    s= [[0 for x in range(n)]
         for y in range(n)]
    r = n // 2
    c = n - 1
    num = 1
    while num <= (n * n):
        if r == -1 and c == n:
            c = n - 2
            r = 0
        else:
            if c == n:
                c = 0
            if r < 0:
                r = n - 1
            if s[int(r)][int(c)]:
                c = c - 2
                r = r + 1
                continue
            else:
                s[int(r)][int(c)] = num
                num = num + 1
        c = c + 1
```

```

        r=r-1
    print("\nSum of all row, column and diagonals = ",
          n * (n * n + 1) // 2, "\n")
    for i in range(0, n):
        for j in range(0, n):
            print('%2d ' % (s[i][j]), end="")
        print()
    print("\nWELCOME:)\n")
    print("THIS PROGRAM RETURNS SAME SUM OF EACH ROW, COLUMN AND DIAGONAL!")
    print()
    n = int(input("Please Enter Number of Rows and Column (n*n): "))
    if n%2==0:
        forEvenNumber(n)
    else:
        forOddNumber(n)
    print("\nThank you :)")

```

WELCOME:)

THIS PROGRAM RETURNS SAME SUM OF EACH ROW, COLUMN AND DIAGONAL!

Please Enter Number of Rows and Column (n*n): 5

Sum of all row, column and diagonals = 65

```

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

```

Thank you :)

Process finished with exit code 0

WELCOME:)

THIS PROGRAM RETURNS SAME SUM OF EACH ROW, COLUMN AND DIAGONAL!

Please Enter Number of Rows and Column (n*n): 3

Sum of all row, column and diagonals = 15

```

 2  7  6
 9  5  1
 4  3  8

```

Thank you :)

Process finished with exit code 0