

Assignment 3: Lists

Winter Code Camp

DUE: December 30, 2020, 11:59PM

At the beginning of each python program, please include comments indicating your name and your student number

Example:

```
# Animesh Sarker  
# 105184718
```

Please submit this assignment as a **single zip file** called `FIRSTNAME_LASTNAME_assignment3.zip`.

1. Write a python program that asks the user for marks until they enter -1. Then take their top 6 marks and output the average and median. [20 marks]

Sample input:

```
90  
67  
33  
84  
76  
50  
78  
-1
```

Sample output:

Average of top 6: 74.16666666666667

Median of top 6: 77.0

Save file as `listAssign1.py`

2. Write a python program that asks the user for a day and month of the year. Your program should output what day in the year it is, January 1st being day 1 and December 31st being day 365. Note: assume no leap years. [25 marks]

Month	1	2	3	4	5	6	7	8	9	10	11	12
Days	31	28	31	30	31	30	31	31	30	31	30	31

Sample input:

Month: 6

Day: 10

Sample output: That's day 161 of the year

Save file as `listAssign2.py`

3. I heard that it's highly likely that two people in the same class have the same birthday. Write a python program that will generate random birthdays within a year (assume everyone was born in the same calendar year). Once a duplicate birthday has been generated, output how many total birthdays were generated. (Hint: there are 365 days in a year) [25 marks]

Sample output: Birthdays generated before duplicate: 27

Save file as listAssign3.py

4. During the holiday season, people often exchange gifts. A popular game played when exchanging gifts is "Secret Santa." In this game, participants enter in their names and each person is randomly assigned another participant to buy a gift for. Write a python program that allows the user to enter names of their friends until they enter x. The program should output random "Secret Santa" assignments. Make sure a person doesn't end up buying a gift for themselves. [30 marks]

Sample input:

```
Enter name (x to generate assignments): Usman
Enter name (x to generate assignments): Wahid
Enter name (x to generate assignments): Zain
Enter name (x to generate assignments): Jagraj
Enter name (x to generate assignments): x
```

Sample output:

```
Usman gifts Zain
Zain gifts Wahid
Wahid gifts Jagraj
Jagraj gifts Usman
```

Save file as listAssign4.py