Date: Monday March 11, 2019

Part 1. [30pts] Write a complete program that prints out the basic statistics of a set of numbers entered by a user. You should implement and use the following function that reads 3 integer numbers from the console (after printing "Input : ") and returns the minimum and the maximum of these three numbers.

```
void get_min_max (int *min, int *max)
```

Example: An example run of the program follows.

```
$ run_my_program
Input: 9 1 7
Min: 1, Max: 9, Average: 5.0
```

Part 2. [30pts] Write the following function that calculates roots of a quadratic equation. You can use sqrt(value) functions in math.h.

```
void calc_roots (int a, int b, int c, double *root1, double *root2)
```

Note that the roots of the quadratic equation $ax^2+bx+c = 0$ are given by:

$$x = \frac{-b(+/-)\sqrt{b^2 - 4ac}}{2a}$$

Example: a=2, b=5, c=3 -> root1=-1.0 & root2=-1.5

Part 3. [40pts] Write a function which calculates the day, the month and the year of the date n days from Tuesday January 1, 2019. You need to define three enumeration types for the day of the week, the month of the year and three consecutive years starting in 2019. You can assume that months are 30 days long.

```
Enumeration type for days: {Mon, Tue, Wed, Thu, Fri, Sat, Sun}
Enumeration type for months: {Jan, Feb, Mar, Apr, May, June, July,
Aug, Sept, Oct, Nov, Dec}
Enumeration type for years: {2019, 2020, 2021}
```

The signature of the function is:

```
int calc_date(int n, int *dm, day_t *d, month_t *m, year_t *y)
```

Example: An example run of the program follows.

```
day_t d;
month_t m;
year_t  y;
int dm;
calc_date(0, &dm, &d, &m, &y); /* should return dm=1, m=Jan, y=2019,
d=Mon */
calc_date(30, &dm, &d, &m, &y); /* should return dm=1, m=Feb, y=2019,
d=Wed  */
```