159.272 Programming Language Paradigms
Assignment 2: Judgment Date

For this assignment you will travel back into the past, terminate the Assignment 1 code, and replace it with a Rust implementation. Skeleton code for this is available on Stream. You will need to:

1. Implement function `from_ymd` and `ymd`, which convert between the year/month/day format and integer format, which stores days since 0/1/1, i.e., Year 0, Jan 1st. Note that dates before the reference date must be supported as well, represented as negative integer values.

2. Implement traits `Debug`, `Display` and `Add` for `Date` to enable the code in function `main` to run. Dates before year 0 should be displayed as posititive year values, with the date followed by `BC`. For `Add`, the expression `some_date + 30` should return the date 30 days after `some_date`.

You can (and should) implement additional functions as needed. Do not use any external crates. Once everything has been implemented, the code in function `main` should print the following:

```
Date { days: 738885 }
2/12/31 BC
1/1/30 BC
1/3/1 BC
1/3/31 BC
1/4/30 BC
1/5/30 BC
1/6/29 BC
1/7/29 BC
1/8/28 BC
1/9/27 BC
1/10/27 BC
1/11/26 BC
1/12/26 BC
0/1/25
0/2/24
0/3/25
0/4/24
0/5/24
0/6/23
0/7/23
```

Submit your assignment solution via Stream.