

IN_CLASS ASSIGNMENT

(*Science: day of the week*) Zeller's congruence is an algorithm developed by Christian Zeller to calculate the day of the week. The formula is

$$h = \left(q + \left\lfloor \frac{26(m+1)}{10} \right\rfloor + k + \left\lfloor \frac{k}{4} \right\rfloor + \left\lfloor \frac{j}{4} \right\rfloor + 5j \right) \% 7$$

where

- **h** is the day of the week (0: Saturday, 1: Sunday, 2: Monday, 3: Tuesday, 4: Wednesday, 5: Thursday, 6: Friday).
- **q** is the day of the month.
- **m** is the month (3: March, 4: April, ..., 12: December). January and February are counted as months 13 and 14 of the previous year.
- **j** is the century (i.e., $\left\lfloor \frac{year}{100} \right\rfloor$).
- **k** is the year of the century (i.e., $year \% 100$).

Write a program that prompts the user to enter a year, month, and day of the month, and then it displays the name of the day of the week. Here are some sample runs:

```
Enter year: (e.g., 2008): 2013 ↵ Enter
Enter month: 1-12: 1 ↵ Enter
Enter the day of the month: 1-31: 25 ↵ Enter
Day of the week is Friday
```

```
Enter year: (e.g., 2008): 2012 ↵ Enter
Enter month: 1-12: 5 ↵ Enter
Enter the day of the month: 1-31: 12 ↵ Enter
Day of the week is Saturday
```

