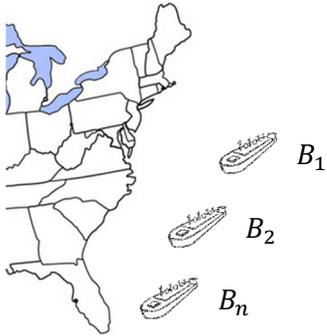


_____ (20pts) **Answer the 5 multiple choice questions online.** Log it ERNIE, click on the class, then Exams.

Problem: Will there be enough supply?



According to the U.S. Energy Information Administration, the United States imported 297,920,000 barrels of oil in December 2012. The United States used 19,150,000 barrels per day, and China used 9,400,000 barrels per day. (statistics dated 2009).

Many boats deliver oil barrels. Let's assume that some boats are scheduled and others randomly arrive that day. **Based on those deliveries, how many days will it last the country?**

Requirements for the program (not necessarily in order) – Whatever is not indicated is up to you (within taught limits..)!

- Prompt the user for how many barrels per day is used. Trap the user when invalid.
- Prompt the user how many scheduled boats arrived. Trap when invalid.
- Using a loop, prompt the user for the number of barrels on each scheduled boat. Assume those values are valid.
- To handle the random arrival, prompt the user for the number of random boats. Generate a vector of that many random integers between 1 and 2 million barrels. Show the user these barrel values.
- Compute how many barrels were delivered. Omit the semi-colon.
- Conclude: How many days will that last?

For example:

Assuming the following givens: 15 million barrels used daily.

There are 3 scheduled boats: $B_1 = 1\text{million}$, $B_2 = 1.5\text{millions}$, and $B_3 = 1.7\text{millions}$ of barrels.

There are 4 additional random boats, thus:

[1.23millions, 1.84millions, 1.11millions, 1.97millions]

Solve

$$\text{totalBarrels} = B_1 + B_2 + B_3 + \text{Rand}B_1 + \text{Rand}B_2 + \text{Rand}B_3 + \text{Rand}B_4$$

$$\text{totalBarrels} = 1 + 1.5 + 1.7 + 1.23 + 1.84 + 1.11 + 1.97$$

$$\text{totalBarrels} = 10.35\text{millions}$$

Given the use of 15milions barrels per day, we'll last 0 days!

Step 7a) 7b) 7c) are to be in the script file. Submit script file before the timed deadline.

Rubric for Script file:

Intro	5pts
Clean up	5pts
Comments/algorithm	5pts
Spacing	5pts
Indentation	5pts

Prompts	5pts
Validity	10pts
Loops	5pts
Known boats	5pts
Random boats	10pts
Calculation	10pts
Proper displays	5pts
Conclusion	5pts
Testing	7pts
Other	8pts