

Lecture 12 Worksheet

Question 1

In groups discuss any examples of virtual machines that have you encountered.
For each example:

- What is the purpose of the virtual machine ?
- Who would use it ?
- What would you use it for ?

Example 1:

- What is the purpose of the virtual machine ?
- Who would use it ?
- What would you use it for ?

Example 2:

- What is the purpose of the virtual machine ?
- Who would use it ?
- What would you use it for ?

Question 2

For each of the following expressions:

- How would you implement it in Hack Virtual Machine language ?
- Draw the stack at each step of executing the expression.

Assume that variables a, b, c and d are stored in the `static` segment at locations 2, 3, 4 and 5 respectively.

1. `not (a or b)`

2. `d + c + b + a`

3. `(4 + a) * (c - 9)`

4. `true and false`