**OS related questions**

1. **Program layout:**

*BSS or data segment, both are said to be allocated at compile time as they get addresses where they are going to be stored. Each process running the same program has its own BSS area. When running, the BSS data are placed in the data segment. In the executable file, they are stored in the BSS section.*

*BSS*:

What type of variables go to BSS?

1. Global uninitialized or 0 initialized.
2. Global static uninitialized or 0 initialized.
3. Local static POD types uninitialized or 0 initialized.
4. Local static objects (non-POD) types. They are initialized at the time when function is called, hence before that, they’ll be in BSS no matter they are initialized or not.
5. Static object member in class no matter they are initialized or not.
6. Static POD in class uninitialized.

Keeping a variable in BSS means it is given an address, but it is not initialized.

1. **Global variable** and **static member in class**: constructor is called before enter **main** function.
2. **Local static variable**: constructor is only called when execution reaches its declaration at first time.
3. If **Local static variable is POD type**, then it is also initialized before enter **main** function.

Example for POD type: *static int number = 10;*

<https://stackoverflow.com/questions/55510/when-do-function-level-static-variables-get-allocated-initialized>