**Embedded Software Notes**

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| Command line arguments and environment variables |
| Stack  Heap |
| Not initialized global, static, and constant global variables (BSS) |
| Initialized global, static, extern, and constant global variables |
| Text/code segment |

* **Text/code segment** is the part where the code is stored and it is **read only** segment.
* **Initialized variables**

1. **Read only**: constant global variables.
2. **Read and write:** rest of the variables.

* **not initialized variables section (BSS)**

**static int a;**

Now a is stored in BSS and initialized automatically by zero to save power, as a transistor being switched off (0) consumes no power.

**static int a = 0;**

Also, a is stored in BSS section as it is initialized with 0.

**static int a = 5;**

Now a will be stored in the R/W initialized static global variables section as it initialized with a non-zero integer.

**static int a;**

**static int a = 5;** No error, a stored in data section.

**static int a;**

**static int a = 0;**

**static int a = 5;** Compilation error, a redefined

**static int a;**