**Process:** Instance of an executing program.

* Process uses register to store the data.
* Process works.
* State of execution (Program counter stack).
* Parts and temporary holding area (data register state).
* May require special hardware (I/O device).
* OS manages hardware on behalf of application.
* Application is a program on a desk (Static entity).
* Process is a state of program when executing loaded in memory (Active entity).
* Memory space:
* Text and Data: Static state when process first loads.
* Heap: Dynamically created during execution.
* Stack: Grows and shrinks using LIFO.
* Stack will return the address after completion of one instruction it goes to the next.
* Program counter tells about which next instruction to be executed.
* Address space is used in memory representation of a process.
* Page table is used for mapping virtual to physical addresses.