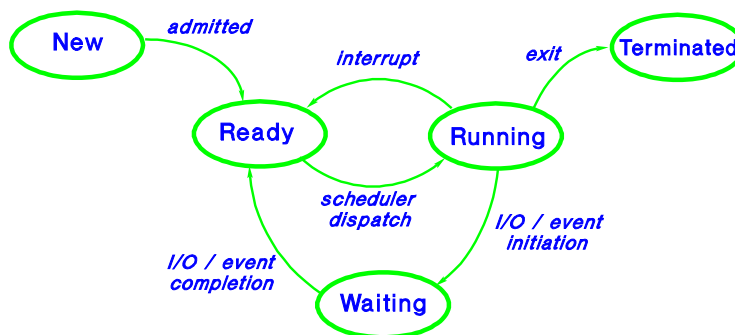


## The Process

- "A program in execution"
- Consists of:
  - The program code ("text")
  - process Status (or state):
    - The registers, including the PC
    - Current execution state
    - I/O status
    - Memory status
    - Accounting info (CPU time used, etc.)
    - Scheduling/priority

PROC010

## Process State Transition Diagram



PROC020

## Process Control Block

<i>Pointer</i>	<i>Process Run state</i>
<i>Process number</i>	
<i>Program Counter</i>	
<i>Registers</i>	
<i>Memory limit info</i>	
<i>Open files</i>	

PROC030

## Process Scheduling

### Short-term scheduler:

*Determines which job in memory to execute*

### Long-term scheduler:

*Determines which jobs to make ready to execute*

### Medium-term scheduler:

*Determines which jobs to place in memory ("swapped in")*

PROC040



## Cooperating Processes Message Passing model

### *Producer:*

```
repeat
  ...
  // produce an item in nextp
  ...
  send(nextp);
until false
```

### *Consumer:*

```
repeat
  receive(nextp);
  ...
  // consume the item in nextp
  ...
until false
```

PROC050

