**Note:**

Some symbols may be slightly modified for use with other diagram types other than the ones already specified.

Many connectors may be able to be re-used, with certain default arrowheads established for a particular diagram type.

**Diagram Abbreviations:**

Use case: U

Class: C

Interaction: IS (Sequence Diagram)  
 IC (Communication Diagram)

State: S

Activity: A

| **Symbol** | **Name** | **Class** | ***Diagram*** | | | | | **Additional Information** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | note | Object | *U* | *C* | *IS*  *IC* | *S* | *A* | rectangle with appearance of fold on top right corner  manilla colored  may be linked to with only one specified connector |
|  | note connector | Connector | *U* | *C* | *IS*  *IC* | *S* | *A* | dotted line connector |
|  | Package | Object | *U* | *C* | *IS*  *IC* | *S* | *A* | Used to group & contain any diagram type  May be user-stretchable, or auto expanded to fit diagram.  Top tab contains title  The box below contains the diagram. |
|  | boundary | Object | *U* |  |  |  |  | rectangle with CAPS text box in top left corner   * this object allows objects drawn within its borders * is not linked to by connectors * connectors may cross border of boundary * objects may not rest on border of boundary? |
|  | actor | Object | *U* |  | *IS*  *IC* |  |  | stick man symbol, with text box below |
|  | case | Object | *U* |  |  |  |  | horizontal oval with text box below OR inside |
|  | extend | Connector | *U* |  |  |  |  | dotted line with arrowhead text << extend>> right of center of line |
|  | include | Connector | *U* |  |  |  |  | dotted line with arrowhead  text << include >> right of center of line |
|  | interaction | Connector | *U* |  |  |  |  | solid black line with no arrowhead at either end |
|  | inheritance | Connector | *U* |  |  |  |  | solid black line with hollow arrowhead |
|  | class | Object |  | *C* |  |  |  | box divided horizontally into 3 compartments. name/attributes/operations   * section with no data remains invisible? * is the qualifier a related object? * see page 57 of text book |
|  | system element | Object |  | *C* |  |  |  | simple rectangle with text centered. |
|  | class relationship | Connector |  | *C* |  |  |  | solid line connector with no/optional arrowhead   * either end indicates one-to-one, one-to-many, or many-to-many * either end may have a text box to indicate role * straight solid line, using right angles to reach target ( line is usually not diagonal) |
|  | navigation | Connector |  | *C* |  |  |  | same as class relationship connector  arrowhead composed of solid lines (not a complete triangle) |
|  | association | Connector |  | *C* |  |  |  | simple dotted line linking a class object to a connector line |
|  | aggregation | Connector |  | *C* |  |  |  | same as class relationship connector  one end of arrow has **hollow** diamond head, with optional text over the arrowhead indicating 1 to 1, 1 to many, many to many. |
|  | composition | Connector |  | *C* |  |  |  | same as class relationship connector  one end of arrow has **solid** diamond head, with optional text over the arrowhead indicating 1 to 1, 1 to many, many to many. |
|  | Inheritance | Connector |  | *C* |  |  |  | Hollow arrow at end of solid line |
|  | sequenceObject | Object |  |  | *IS* |  |  | *I (sequence)*  rectangular box with centered text (underlined at discretion of user?)   * should automatically place at a vertically consistent height * created objects should be placed at a height correlating to the create connector. |
|  | activationBar | Object |  |  | *IS* |  |  | Hollow vertical bar placed directly under an object. All outgoing and returning signals attach to this bar. (indicates that at this moment in time, this object is being used) |
|  | lifeline | Object |  |  | *IS* |  |  | Dotted vertical line connecting object and activation bars.  Required to connect the sequence object and the activation bar at locations activation bar is not used. |
|  | sendMessage | Connector |  |  | *IS* |  |  | *I (sequence)* solid black arrow with solid black arrowhead text box above line (centered or not centered) |
|  | returnMessage | Connector |  |  | *IS* |  |  | Dotted line with simple arrowhead text box above line (on some diagrams I found, this line was solid, exactly like the sendMessage connector) |
|  | Create | Connector |  |  | *IS* |  |  | Creates from the activation bar of an object to a new interaction object. |
| Example of use: | iterator | Object |  |  | *IS* | *A?* |  | Transparent box with title in upper left corner.  surrounds a section of code to loop or alt   * text box is solid: remainder of box is transparent |
|  | communicationObject | Object |  |  | *IC* |  |  | (may be same as sequence object) |
|  | communicationConnector | Connector |  |  | *IC* |  |  | Solid black line connects communication objects only   * multiple text boxes available for each line * each box is uniquely numbered in sequence, staring with 1 * Arrow separate from line indicates direction of flow of events (some diagrams an individual arrow for each text box) |
|  | state | Object |  |  |  | *S* | *A?* | rounded rectangles with text centered |
|  | transition | Connector |  |  |  | *S* |  | Solid line with solid arrowhead connecting sates.   * arrowheads can be simple or solid * line is generally curved instead of angled * text box next to line indicates reason for state change |
|  | initialState | Object |  |  |  | *S* |  | solid black filled circle   * can there be more than one permitted in a diagram? |
|  | finalState | Object |  |  |  | *S* |  | double circle with inner circle solid black.   * can there be more than one in a diagram? |
|  | Internal state | Object |  |  |  | *S* |  | Rounded rectangle with two compartments:   * A title in the top section * Activities in the bottom section   Can only be connected to other internal states? |
| example: | Nest | Object |  |  | *IS?* | *S* |  | ***Same structure as the Interaction Sequence iterator***  Used to group an activity |
|  |  |  |  |  |  |  |  |  |
|  | Activity | Object |  |  |  | *S?* | *A* | ***May be same as state object***  A rounded rectangle |
|  | Decision | Object |  |  |  |  | *A* | A control node, added to a connector  Hollow diamond shaped  Text may or may not be entered  At least one connector comes in and two or more going out |
| Example: | Fork node | Object |  |  |  |  | *A* | A control node, added to a connector one connector points to it, and two or more connectors point away from it  Forks a single activity into many |
| Example: | Join node | Object |  |  |  |  | *A* | ***May be combined with fork node as same object*** A control node, added to a connector  Two or more connectors point to it, and one connector points away from it  Joins multiple cases together |
|  | Swimlane / activity partition | Object |  |  |  |  | *A* | A box with title(s) that divides the diagram up by responsibilities or action groups. Number of rows & columns of partitions are defined by the user.  Only the title is opaque. The rest of the box is transparent, and all activities’ connectors may cross the boundary lines. |