**Layout**

Layout means the arrangement of components within the container.

**LayoutManager-**Manage the all layouts wothing the container

**constructors**

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| **S.N.** | **Constructor & Description** |
| 1 | **BorderLayout()**  Constructs a new border layout with no gaps between components. |
| 2 | **BorderLayout(int hgap, int vgap)**  Constructs a border layout with the specified gaps between components. |

**Class methods**

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| **S.N.** | **Method & Description** |
| 1 | **void addLayoutComponent(Component comp, Object constraints)**  Adds the specified component to the layout, using the specified constraint object. |
| 2 | **void addLayoutComponent(String name, Component comp)**  If the layout manager uses a per-component string, adds the component comp to the layout, associating it with the string specified by name. |
| 3 | **int getHgap()**  Returns the horizontal gap between components. |
| 4 | **float getLayoutAlignmentX(Container parent)**  Returns the alignment along the x axis. |
| 5 | **float getLayoutAlignmentY(Container parent)**  Returns the alignment along the y axis. |
| 6 | **int getVgap()**  Returns the vertical gap between components. |
| 7 | **void invalidateLayout(Container target)**  Invalidates the layout, indicating that if the layout manager has cached information it should be discarded. |
| 8 | **void layoutContainer(Container target)**  Lays out the container argument using this border layout. |

**Layout Manager Classes:**

Following is the list of commonly used controls while designed GUI using AWT.

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| **Sr. No.** | **LayoutManager & Description** |
| 1 | **BorderLayout**-The borderlayout arranges the components to fit in the five regions: east, west, north, south and center. |
| 2 | **CardLayout-**The CardLayout object treats each component in the container as a card. Only one card is visible at a time. |
| 3 | **FlowLayout-**The FlowLayout is the default layout.It layouts the components in a directional flow. |
| 4 | [**GridLayout**](https://www.tutorialspoint.com/awt/awt_gridlayout.htm)**-**The GridLayout manages the components in form of a rectangular grid. |
| 5 | **GridBagLayout-**This is the most flexible layout manager class.The object of GridBagLayout aligns the component vertically,horizontally or along their baseline without requiring the components of same size. |