Unit -1

2 marks & 4 marks Question Bank

**Bootstrap**

**1. What is Bootstrap?**

* **Answer**: Bootstrap is a free, open-source front-end framework used for developing responsive and mobile-first websites. It contains CSS and JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components. It allows for faster and more efficient web development.

**2. What are the main features of Bootstrap?**

* **Answer**:
  + **Responsive Grid System**: Allows creating flexible and responsive layouts.
  + **Predefined CSS classes**: For styling elements like text, buttons, tables, etc.
  + **JavaScript Components**: Ready-to-use features such as modals, carousels, tooltips, etc.
  + **Customizable Themes**: You can modify Bootstrap themes with your own styles or use pre-built themes.
  + **Cross-browser compatibility**: Bootstrap ensures compatibility across all modern browsers.

**3. Explain the Bootstrap Grid System.**

* **Answer**: The grid system in Bootstrap is built on a 12-column layout that is responsive. It divides the screen into 12 columns, and you can control how elements span across the grid. The grid system allows you to create layouts that are optimized for different screen sizes. It uses classes like .col-xs-, .col-sm-, .col-md-, and .col-lg- to define how many columns an element should span at different breakpoints (small, medium, large, etc.).

**4. What are the different grid classes available in Bootstrap?**

* **Answer**:
  + **.col-**: For extra small screens (default).
  + **.col-sm-**: For small devices (≥576px).
  + **.col-md-**: For medium devices (≥768px).
  + **.col-lg-**: For large devices (≥992px).
  + **.col-xl-**: For extra large devices (≥1200px).

**5. What is the purpose of the .container and .container-fluid classes in Bootstrap?**

* **Answer**:
  + **.container**: This class provides a fixed-width container that changes its width depending on the screen size (responsive).
  + **.container-fluid**: This class provides a full-width container, meaning it always spans the entire width of the viewport.

**6. What is the difference between .row and .col in Bootstrap?**

* **Answer**:
  + **.row**: Defines a horizontal row to contain columns in the grid system.
  + **.col**: Represents a column inside a .row element. You use the .col class along with specific breakpoint classes (.col-sm-, .col-md-, etc.) to define how many columns the element should span.

**7. Explain the concept of responsiveness in Bootstrap.**

* **Answer**: Bootstrap is designed to be mobile-first and responsive. It uses a fluid grid system that adapts to different screen sizes. You can control the layout at each breakpoint (extra small, small, medium, large, extra-large) by using the respective grid classes. Media queries are employed in Bootstrap to adjust the layout based on the device's screen size.

**8. What are the different types of buttons available in Bootstrap?**

* **Answer**: Bootstrap provides several predefined button styles:
  + **.btn-primary**: A primary button with a blue background.
  + **.btn-secondary**: A secondary button with a gray background.
  + **.btn-success**: A green button typically used for success actions.
  + **.btn-danger**: A red button used for critical or destructive actions.
  + **.btn-warning**: An orange button used for warnings.
  + **.btn-info**: A light blue button used for informational actions.
  + **.btn-light**: A light-colored button.
  + **.btn-dark**: A dark-colored button.
  + **.btn-link**: A button styled as a link.

**9. How do you add images in Bootstrap?**

* **Answer**: To add responsive images in Bootstrap, you use the .img-fluid class. This ensures that the image scales according to its container, maintaining responsiveness. Example:

html

Copy code

<img src="image.jpg" class="img-fluid" alt="Responsive Image">

**10. What are the Bootstrap modal components, and how do you use them?**

* **Answer**: Bootstrap modals are components that display content in a dialog box overlaid on the current page. Modals are used to present information, forms, or confirmation dialogs without navigating away from the page. To use a modal:
  1. Create a button to trigger the modal.
  2. Create a modal structure with .modal, .modal-dialog, .modal-content, etc.
  3. Use JavaScript or data attributes to trigger and control the modal.

**11. Explain the use of Bootstrap navbar.**

* **Answer**: The **navbar** in Bootstrap is a navigation bar that can be customized to contain links, forms, buttons, etc. It is responsive and can collapse into a hamburger menu on smaller screens. You can use classes like .navbar, .navbar-expand-lg, .navbar-dark, and .navbar-light to control the appearance and behavior of the navbar.

**12. What are Bootstrap cards, and how are they used?**

* **Answer**: Bootstrap **cards** are flexible and extensible content containers with multiple options for headers, footers, images, and more. They are often used to display content like user profiles, blog posts, or product listings.

**13. What is the Bootstrap grid breakpoints system?**

* **Answer**: Bootstrap grid system is based on breakpoints, which are predefined screen widths at which the layout changes. These breakpoints are:
  + **Extra small** (<576px) - col-
  + **Small** (≥576px) - col-sm-
  + **Medium** (≥768px) - col-md-
  + **Large** (≥992px) - col-lg-
  + **Extra large** (≥1200px) - col-xl-

4 marks Question Bank

1. Explain any four key features of bootstrap
2. Explain two ways to integrate bootstrap in to your project.
3. Explain carousel and its key parts.
4. Explain difference between Bootstrap menu and JQuery Menu
5. Explain any four bootstrap components.