Bootstrap 5 Exercises

1. **Setting Up Bootstrap 5**

   Exercise 1.1:
   Create a basic HTML page and link Bootstrap 5 via **CDN**.
   Exercise 1.2:
   Set up a project using **npm** or **downloaded Bootstrap files**. Use the downloaded files in a sample HTML page.

2. **Bootstrap Structure and Files**

   Exercise 2.1:
   Explore the structure of the downloaded Bootstrap directory. Identify and explain the purpose of the **CSS, JS, and icons folders**.
   Exercise 2.2:
   Modify your HTML to include Bootstrap's **JavaScript plugins** via bootstrap.bundle.min.js.

3. **Fundamentals of Responsive Grid Layout**

   Exercise 3.1:
   Create a container with **three columns** that stack vertically on mobile, two-per-row on tablets, and three-per-row on desktops.
   Exercise 3.2:
   Use .container, .row, and .col-* classes appropriately for responsive design.

4. **Column Layouts and Grid Classes**

   Exercise 4.1:
   Design a **two-column layout** with a sidebar (col-md-3) and content area (col-md-9).
   Exercise 4.2:
   Create a **four-column layout** (col-sm-3) with equal width.

5. **Alignment and Reordering in Grid**

   Exercise 5.1:
   Use justify-content-center and align-items-center to center content inside a row.
   Exercise 5.2:
   Reorder columns on different screen sizes using order-md-2, order-md-1.

6. **Responsive Flexbox Utilities**

   Exercise 7.1:
   Create a navbar using d-flex, flex-column, and flex-md-row for responsive behavior.
   Exercise 7.2:
   Use justify-content-between and align-items-center in a card layout.

7. Typography

Exercise 7.1:
Create a sample page with different Bootstrap typography utilities: display-1, lead, text-muted, fw-bold, etc.

Exercise 7.2:
Use text-uppercase, text-lowercase, text-capitalize.

8. Forms

Exercise 8.1:
Create a registration form using Bootstrap form components like form-control, form-check, and input-group.

Exercise 8.2:
Style a login form using form-floating.

9. Buttons

Exercise 9.1:
Create buttons using all contextual classes: btn-primary, btn-secondary, btn-outline-*, etc.

Exercise 9.2:
Add button groups using btn-group, and create toggle buttons with checkboxes.

10. Navbars and Navigation

Exercise 10.1:
Create a responsive navbar with logo, navigation links, and a search form.

Exercise 10.2:
Use nav, nav-tabs, nav-pills for creating tabbed navigation.

11. Cards and Media Objects

Exercise 11.1:
Create a profile card using card, card-body, card-title, and card-img-top.

Exercise 11.2:
Design a media object layout using media and align an image to the left of the content.

12. Spacing Utilities

Exercise 12.1:
Apply margin (m-3, mt-4) and padding (p-2, py-5) utilities on layout sections.

Exercise 12.2:
Build a pricing section where spacing improves the layout.

13. Colors and Backgrounds

Exercise 13.1:
Create a dashboard page using contextual background classes (bg-primary, bg-warning, etc.) and text colors.

Exercise 13.2:
Use bg-gradient with bg-dark and white text.

14. Display and Visibility

Exercise 14.1:
Use d-none, d-md-block, d-lg-flex to hide/show sections based on screen size.
Exercise 14.2:
Create a responsive sidebar that only shows on tablets and above.

15. Borders, Shadows, and Rounded Corners

Exercise 15.1:
Add border utilities like border, border-primary, border-3, and rounded-circle to an image.
Exercise 15.2:
Use shadow, shadow-lg and rounded-pill in a card.

16. Positioning Utilities

Exercise 16.1:
Create a fixed footer using position-fixed bottom-0.
Exercise 16.2:
Use position-relative and position-absolute to overlay a badge over an image.

17. Icons with Bootstrap Icons

Exercise 17.1:
Install and use Bootstrap Icons in a webpage: add social media icons in the footer.
Exercise 17.2:
Replace text buttons with icon-only buttons using Bootstrap Icons.

18. Bootstrap 5 JavaScript Plugins

Exercise 18.1:
Add a **modal popup** triggered by a button.
Exercise 18.2:
Create a collapsible accordion using accordion and Bootstrap JavaScript behavior.

19. Customization with Sass

Exercise 19.1:
Set up a Bootstrap 5 project with Sass using npm.
Exercise 19.2:
Customize primary colors and border radius via _variables.scss and recompile Bootstrap.