Assignment: Flexbox in CSS

Q1. Describe the main differences between the CSS Flexbox layout model and the CSS Grid layout model. When would you choose to use one over the other?

Ans)

Flexbox vs Grid

Flexbox

- One-dimensional (row **or** column).
- Best for **aligning items along a single axis**.
- Example: navbar, centering a div.

Grid

- Two-dimensional (rows **and** columns).
- Best for **complex layouts** needing both directions.
- Example: page layouts, image galleries.

When to use

- **Flexbox** for simple, linear layouts.
- **Grid** for entire page structures or layouts needing precise row-column placement.

Q2. Explain the role of the following key properties in the Flexbox layout model
1. justify-content
2. align-items
3. gap
4. flex-direction
5. flex-wrap

Ans)

1. justify-content

Role: Aligns items along the main axis (horizontal if flex-direction: row; vertical if column).
Values: flex-start, flex-end, center, space-between, space-around, space-evenly.
Example use: Spacing out nav links evenly in a row.

2. align-items

Role: Aligns items along the cross axis (perpendicular to main axis).
Values: stretch (default), flex-start, flex-end, center, baseline.
Example use: Vertically centering items in a horizontal navbar.

3. gap

Role: Defines space between flex items without using margins.
Example use: Adding consistent spacing between cards in a flex container.

4. flex-direction

Role: Sets main axis direction of flex items.
Values: row (default), row-reverse, column, column-reverse.
Example use: Making items stack vertically by setting flex-direction: column.
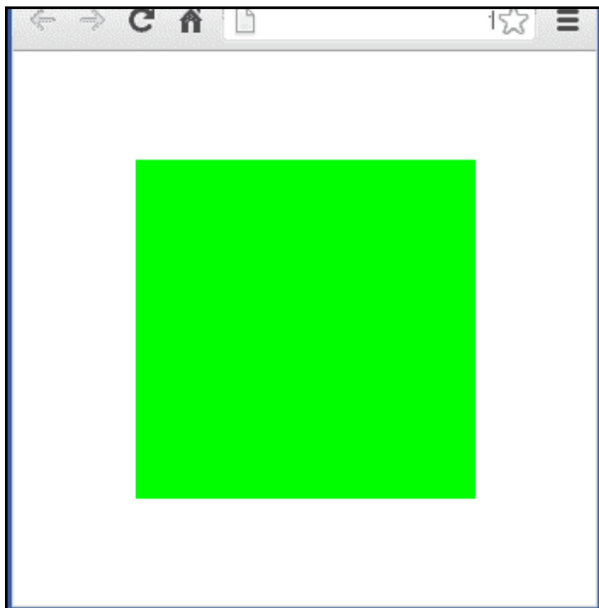
5. flex-wrap

Role: Controls wrapping of items when there's not enough space.
Values: nowrap (default), wrap, wrap-reverse.
Example use: Allowing items to move to the next line instead of shrinking.

Q3. Write the code to center a div using CSS Flexbox.
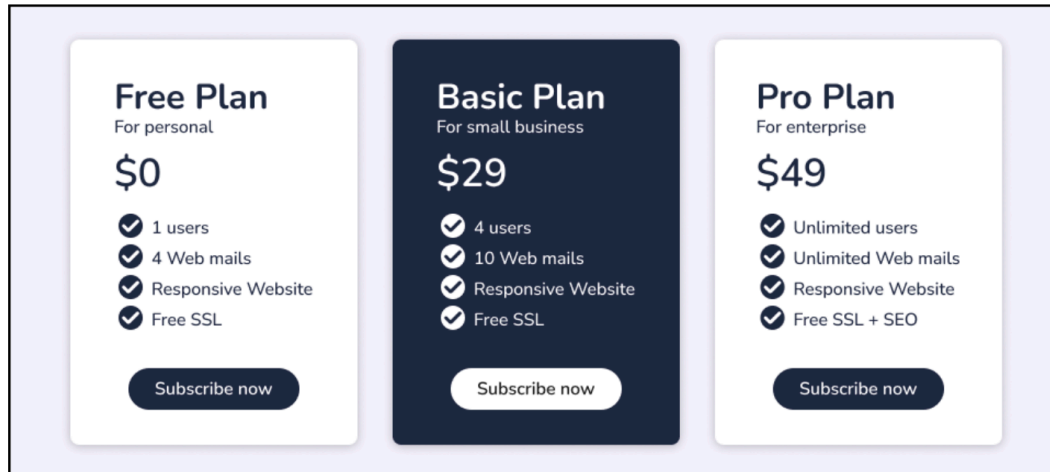
Reference Image given below.

Ans)

HTML: html file link

CSS: css file link

Q4. A client of yours wants to add a pricing section on their website to showcase their newly introduced premium plans.
You have to build the pricing section for their business. They have provided you with the figma design for the same. **Link**
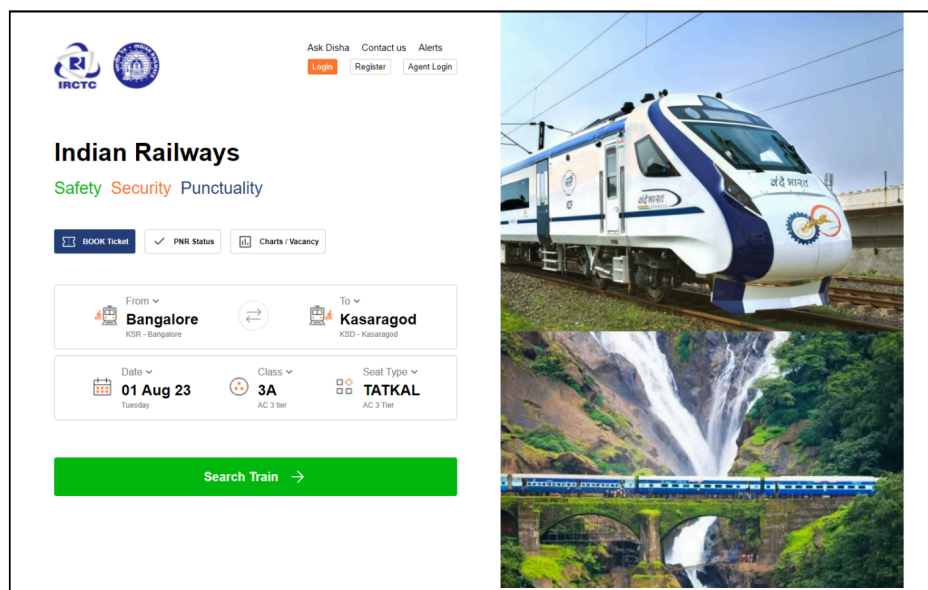

Ans)

HTML: html file link

CSS: css file link

Q5. build a clone of the IRCTC Ticket booking page.

Assets can be downloaded from the figma file provided below

Link to the figma file: **Link**

Ans)

HTML: html file link

CSS: css file link