

Here's a brief explanation of each term and the differences between them:

1. **Layouts:** A layout is a base template that defines the overall structure of your web page. It usually contains common elements like the DOCTYPE, head, and body tags, as well as placeholders for content that will be injected by child templates.
2. **Partials:** Partials are smaller, reusable components or templates that can be included within other templates to avoid duplicating code. Examples of partials could be a header, footer, or a navigation bar.
3. **Extends:** The **extends** keyword is used in a Pug template to inherit the structure and content of a layout. When a template extends a layout, it can override or append content to the blocks defined in the layout.
4. **Include:** The **include** keyword is used to import a partial into another template. It allows you to reuse partials across different templates and maintain a consistent structure.

Differences:

- **extends** is used to inherit a layout, whereas **include** is used to import partials into a template.
- Layouts are meant to define the overall structure of a web page, while partials are smaller, reusable components.
- When using **extends**, you can override or append content to the blocks defined in the layout. With **include**, the content of the partial is directly inserted into the template.

Here's a simple example to illustrate the usage of layouts, partials, extends, and includes in Pug:

Layout.pug:


```
doctype html
html
  head
    title My Website
  body
    header
      //- Include header partial
      include header.pug
    main
      //- Define a block for content to be injected by child templates
      block content
    footer
      //- Include footer partial
      include footer.pug
```

Header.pug(a partial):

```
nav
  ul
    li Home
    li About
    li Contact
```

footer.pug (a partial):


pug

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```
footer
  p Copyright &copy; 2023 My Website. All rights reserved.
```

index.pug (a template that extends the layout):

pug

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```
//- Extend the layout
extends layout.pug

//- Add content to the "content" block
block content
  h1 Welcome to My Website
  p This is the home page.
```

With this setup, **index.pug** extends the **layout.pug** and injects its content into the **block content** placeholder. The header and footer partials are included in the layout, making them reusable across different pages.