

# Drupal Interview Ultimate Guide (Full 23 Questions)

## 1. How routes are defined in D7 and D10

### What is it?

Defines how URLs connect to content.

### Real-world Scenarios

- D7: Using hook\_menu() to declare routes.
- D10: Using routing YAML files.

### End-to-End Solution

```
// D7
function mymodule_menu() {
  $items['hello'] = array(
    'title' => 'Hello page',
    'page callback' => 'mymodule_hello_page',
  );
  return $items;
}

// D10 YAML
mymodule.hello:
  path: '/hello'
  defaults:
    _controller: '\Drupal\mymodule\Controller\HelloController::hello'
    _title: 'Hello Page'
```

### Best Practices

- Use descriptive route names.
- Secure routes with permissions.
- Document custom routes.

## 2. Difference in theme files between D7 and D10

### What is it?

Theme layer controls the look and feel.

### Real-world Scenarios

- D7: Uses .tpl.php files mixing PHP & HTML.
- D10: Uses clean .html.twig templates.

### Best Practices

- Separate logic from presentation.
- Use Twig for security.
- Organize templates neatly.

## 3. What are the migration approaches from D7 to D10

### What is it?

Move content and configuration from older to newer Drupal.

### Real-world Scenarios

- Use core Migrate, Migrate Plus, and Migrate Tools modules.
- Map fields and test in staging.

### Best Practices

- Always backup first.
- Migrate in batches.
- Validate migrated content.

## 4. Batch Process and Queue Worker

### What is it?

Handles large or delayed background tasks.

### Real-world Scenarios

- Batch: process in chunks (e.g., update thousands of users).
- Queue Worker: background tasks (e.g., send emails).

### Best Practices

- Always test with small data.
- Avoid timeouts by chunking large processes.

## 5. Drupal Commerce

### What is it?

A framework for building e-commerce stores in Drupal.

### Real-world Scenarios

- Create product catalogs, carts, checkout, payments, etc.
- Manage orders and customers within Drupal.

### Best Practices

- Use product variations for complex products.
- Test payment gateways thoroughly.

## 6. Drupal Multisite Setup

### What is it?

Run multiple Drupal websites from a single codebase.

### Real-world Scenarios

- Use /sites/site1.com, /sites/site2.com folders.
- Share core and modules across all sites.

### Best Practices

- Separate config for each site.
- Use symlinks for common libraries.

## 7. What are hooks in Drupal?

### What is it?

Allow custom code to react to events in Drupal.

### Real-world Scenarios

- hook\_node\_insert() runs when node is created.
- Use hooks to alter or add functionality.

### End-to-End Solution

```
function mymodule_node_insert($node) {  
    // Send email on new content  
}
```

### Best Practices

- Avoid heavy logic in hooks.
- Use only needed hooks.

## 8. Hooks in Drupal theme

### What is it?

Alter variables before sending to templates.

### Real-world Scenarios

- mytheme\_preprocess\_node() modifies node output.
- Add extra classes or data to templates.

#### **End-to-End Solution**

```
function mytheme_preprocess_node(&$variables) {
  $variables['title'] = strtoupper($variables['title']);
}
```

#### **Best Practices**

- Use only needed preprocess hooks.
- Document customizations.

## **9. What are Symfony components used in Drupal10?**

#### **What is it?**

Drupal 10 uses Symfony for core services.

#### **Real-world Scenarios**

- Routing, Event Dispatcher, HttpFoundation, Serializer, Console.

#### **Best Practices**

- Leverage Symfony best practices.
- Check for reusable components.

## **10. What is the use of Group module in Drupal10?**

#### **What is it?**

Creates mini communities inside a site.

#### **Real-world Scenarios**

- E.g., departments with their own members & content.

#### **Best Practices**

- Use permissions to control group access.
- Plan group content types wisely.

## **11. Explain content workflow**

#### **What is it?**

Defines publishing stages of content.

#### **Real-world Scenarios**

- Example: Draft -> Needs Review -> Published.

#### **Best Practices**

- Use Content Moderation module.
- Create clear workflow roles.

## **12. How can we create custom entity? Why?**

#### **What is it?**

For special data types not covered by nodes.

#### **Real-world Scenarios**

- Example: Employee Record entity.

#### **End-to-End Solution**

```
@ContentEntityType(
  id = "employee_record",
  label = @Translation("Employee Record")
)
```

#### **Best Practices**

- Use Drupal Console for scaffolding.
- Use fields to extend entity data.

## 13. SSO authentication in Drupal10

### What is it?

Allows login once to access multiple systems.

### Real-world Scenarios

- Use modules: SimpleSAMLphp, OAuth.
- Example: one company login for email + Drupal.

### Best Practices

- Test with identity provider before production.
- Secure SSO endpoints.

## 14. Session and Cookie difference

### What is it?

Both store data but differ in location.

### Real-world Scenarios

- Session = server-side; Cookie = browser-side.

### Best Practices

- Use sessions for sensitive data.
- Set cookies securely with HTTPS.

## 15. Drupal webforms

### What is it?

Create surveys, contact forms, registrations.

### Real-world Scenarios

- Add conditions, validations, email handlers.

### Best Practices

- Limit file upload sizes.
- Use CAPTCHA to avoid spam.

## 16. Difference between interface and abstract class

### What is it?

Both define blueprints, but differ in flexibility.

### Real-world Scenarios

- Interface: only method names.
- Abstract class: methods + variables.

### End-to-End Solution

```
interface Animal { public function makeSound(); }

abstract class Vehicle {
    abstract public function start();
    public function stop() { echo "Stopped"; }
}
```

### Best Practices

- Favor interfaces for flexibility.
- Use abstract class for partial implementation.

## 17. What is traits?

### What is it?

Reusable methods across multiple classes.

### **Real-world Scenarios**

- Avoids multiple inheritance problems.

### **End-to-End Solution**

```
trait Logger {  
  public function log($msg) { echo $msg; }  
}  
  
class User {  
  use Logger;  
}
```

### **Best Practices**

- Keep traits small and focused.
- Use for cross-cutting concerns.

## **18. Employee attendance system calculation**

### **What is it?**

Track employee in/out time and calculate total hours.

### **Real-world Scenarios**

- Store swipe\_in and swipe\_out timestamps.
- Calculate difference between them.

### **End-to-End Solution**

```
$totalTime = strtotime($outTime) - strtotime($inTime);  
echo gmdate("H:i:s", $totalTime);
```

### **Best Practices**

- Store time in UTC.
- Validate times before calculation.

## **19. How to resolve merge conflicts in Git**

### **What is it?**

Occurs when two users modify the same file.

### **Real-world Scenarios**

- Pull latest changes, manually fix conflicts, commit.

### **Best Practices**

- Use descriptive commit messages.
- Review changes before committing.

## **20. Basic git commands**

### **What is it?**

Command line tools to manage version control.

### **Real-world Scenarios**

- git clone, git status, git add, git commit, git push, git pull.

### **Best Practices**

- Commit often with clear messages.
- Push regularly to avoid conflicts.

## **21. Explain migration work D7 to D10, D9 to D10**

### **What is it?**

Upgrading Drupal core & modules.

### **Real-world Scenarios**

- D7->D10: Full migration using Migrate module.

- D9->D10: Mostly code updates + contrib updates.

**Best Practices**

- Test on staging first.
- Use upgrade status module.

## 22. Challenges faced in migration

**What is it?**

Common problems in data & module compatibility.

**Real-world Scenarios**

- Custom modules not ported.
- Contrib modules not ready for D10.

**Best Practices**

- Test every step.
- Communicate with stakeholders.

## 23. How to avoid data loss during large migration

**What is it?**

Careful planning reduces risks.

**Real-world Scenarios**

- Break migration into small batches.
- Backup before migration.

**Best Practices**

- Use --update for incremental runs.
- Validate migrated data thoroughly.