



COMPLETE HACK DEVELOPMENT SETUP GUIDE

From Zero to Facebook Engineer Environment (2 Hours)

▮ TABLE OF CONTENTS

1. [Prerequisites & System Check](#)
2. [WSL Installation & Troubleshooting](#)
3. [VS Code Remote WSL Setup](#)
4. [PHP 8.3 Installation \(Hack-Compatible\)](#)
5. [Hack Project Structure](#)
6. [Create & Run First .hack File](#)
7. [Interactive Calculator Example](#)
8. [VS Code Workflow Optimization](#)
9. [Troubleshooting Common Errors](#)
10. [Production Templates](#)

1. PREREQUISITES & SYSTEM CHECK

- ✓ Windows 10/11 (Build 19041+)
- ✓ 8GB+ RAM recommended
- ✓ Admin access for PowerShell
- ✓ Internet connection

Check Windows version:

```
winver
```

2. WSL INSTALLATION & TROUBLESHOOTING

2.1 Quick Install (Windows 11)

```
# PowerShell as Administrator
wsl --install
```

Restart required → Ubuntu auto-installs

2.2 Manual Fix (Error: "Class not registered")

```
# Repair WSL components
dism.exe /online /disable-feature /featurename:Microsoft-Windows-Subsystem-Linux /norestart
dism.exe /online /disable-feature /featurename:VirtualMachinePlatform /norestart
shutdown /r /t 0

# After restart (PowerShell Admin)
dism.exe /online /enable-feature /featurename:Microsoft-Windows-Subsystem-Linux /all /norestart
dism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestart
wsl --update
wsl --install -d Ubuntu
```

2.3 Verify WSL

```
wsl --list --verbose
# Expected: Ubuntu (Default) Stopped 2
```

3. VS CODE REMOTE WSL SETUP

3.1 Install Extensions (VS Code Windows)

1. Ctrl+Shift+X → Extensions
2. Install: "Remote - WSL" (Microsoft)
3. Install: "Hack" (vscode-hack)

3.2 Connect to WSL

```
# In WSL Ubuntu terminal
code .
```

New VS Code window opens → Bottom-left: WSL: Ubuntu ✓

3.3 Fix File Explorer (Not Visible)

```
Ctrl+Shift+E → Explorer appears on left  
View → Explorer → Checkmark
```

4. PHP 8.3 INSTALLATION (Hack-Compatible)

4.1 Install PHP 8.3 CLI

```
sudo apt update  
sudo apt install php8.3 php8.3-cli -y
```

4.2 Verify Installation

```
php8.3 --version  
# Expected: PHP 8.3.6 (cli)
```

Note: HHVM not available for Ubuntu 24.04 → PHP 8.3 runs 95% Hack code

5. HACK PROJECT STRUCTURE

```
your-project/  
├── .hhconfig          # Hack typechecker config  
├── hello.hack          # Simple program  
├── calculator.hack     # Interactive app  
└── api.hack           # API example
```

5.1 Create Project Config

```
echo "infer_missing:true" > .hhconfig
```

6. CREATE & RUN FIRST .HACK FILE

6.1 Terminal Method (Fast)

```
cat > hello.hack << 'EOF'  
<?php  
echo "  FIRST HACK FILE SUCCESS!\n";  
echo "Meta-style development ready!  \n";  
?>  
EOF
```

```
php8.3 hello.hack
```

6.2 VS Code GUI Method

1. Ctrl+Shift+E → Explorer
2. ▢ New File → "hello.hack"
3. Paste code above
4. Ctrl+S → Save
5. Ctrl+` → php8.3 hello.hack

✓ Expected Output:

```
▢ FIRST HACK FILE SUCCESS!  
Meta-style development ready! ▢
```

7. INTERACTIVE CALCULATOR EXAMPLE

7.1 Create Calculator

```
cat > calculator.hack << 'EOF'  
<?php  
echo "▢ META CALCULATOR ▢\n";  
echo "=====\n";  
  
echo "Enter first number: ";  
$num1 = (float)trim(fgets(STDIN));  
echo "Enter second number: ";  
$num2 = (float)trim(fgets(STDIN));  
  
echo "\n▢ RESULTS:\n";  
echo "Number 1: $num1\n";  
echo "Number 2: $num2\n";  
echo "Sum: " . ($num1 + $num2) . "\n";  
?>  
EOF
```

7.2 Run Interactive Calculator

```
php8.3 calculator.hack
```

Input: 25 → Enter → 37 → Enter

Output: Sum: 62

8. VS CODE WORKFLOW OPTIMIZATION

8.1 10-Second Workflow

```
1. Ctrl+Shift+E → Explorer
2. [ ] New File → "project.hack"
3. Paste template → Edit
4. Ctrl+S → Save
5. Ctrl+` → php8.3 project.hack
```

8.2 Useful Shortcuts

```
Ctrl+Shift+E → Explorer
Ctrl+` → Terminal
Ctrl+S → Save
F5 → Debug (after PHP Debug extension)
Ctrl+Shift+P → Command Palette
```

8.3 Status Indicators

```
✓ Bottom-left: WSL: Ubuntu
✓ Status bar: Hack 100%
✓ File icon: Purple Hack logo
✓ No red squiggles → Syntax OK
```

9. TROUBLESHOOTING COMMON ERRORS

| Error | Cause | Fix |
|-------------------------|------------------------|-----------------------|
| Class not registered | WSL MSI broken | ws1 --install (Admin) |
| hhvm: command not found | No HHVM (Ubuntu 24.04) | Use php8.3 |
| Prints code as text | No <?php | Add <?php top |
| unexpected end of file | Missing ?> | Add ?> bottom |
| php 8.3 file.hack | Space in command | php8.3 file.hack |
| File Explorer missing | Hidden panel | Ctrl+Shift+E |

10. PRODUCTION TEMPLATES

10.1 Basic Template

```
<?php
echo "👋 Project ready!\n";
// Your code here
?>
```

10.2 Calculator Template

```
<?php
echo "Enter number: ";
$input = trim(fgets(STDIN));
// Process $input
echo "Result: $result\n";
?>
```

10.3 API Template

```
<?php
function getData($id): array {
    return ['id' => $id, 'status' => 'success'];
}
$data = getData(1);
echo json_encode($data) . "\n";
?>
```

📋 FINAL ACHIEVEMENT CHECKLIST

- ✓ ☐ WSL Ubuntu 24.04 running
- ✓ ☐ VS Code Remote WSL connected
- ✓ ☐ PHP 8.3 installed & verified
- ✓ ☐ .hhconfig created
- ✓ ☐ hello.hack executes cleanly
- ✓ ☐ calculator.hack interactive works
- ✓ ☐ VS Code workflow: 10 seconds/file
- ✓ ☐ Zero parse errors
- ✓ ☐ Facebook engineer ready! 📧

📋 HELPDESK COMMANDS

```
# Quick status check
wsl --list --verbose
php8.3 --version
ls *.hack

# Reset everything
```

```
rm *.hack  
echo "infer_missing:true" > .hhconfig  
code .
```

This document guides anyone from zero to production Hack development in 2 hours! 📄

Share this guide - perfect for team onboarding or interview prep!



1. Meta-9th-dec.pdf