

Build a Telegram Bot with PHP

Build a Telegram bot with PHP. Webhooks, inline queries, and server deployment.

DevOps Instructor: Derek Holtzman • 5 sections • 41 lessons • 14.00h total

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About this course

This course teaches you to build a Telegram bot with PHP. You will learn to set up webhooks, handle inline queries, manage chat interactions, and deploy your PHP bot to a live server.

Course curriculum

Foundations and Setup

- **How the Telegram Bot API Works (12m)**
Understand the core concepts of updates, messages, and how your PHP server communicates with Telegram.
- **Creating Your First Bot with BotFather (8m)**
A step-by-step guide to getting your unique API token and configuring basic bot details.
- **Setting Up Your Local PHP Environment (15m)**
Prepare a local server (like XAMPP or MAMP) and install necessary tools for testing your bot.
- **Choosing Your Development Approach: Polling vs. Webhooks (10m)**
Learn the difference between these two methods and decide which is best for your project's needs.
- **Securing Your Bot Token (7m)**
Best practices for storing your API key securely and why you should never commit it to public repositories.
- **Introduction to JSON and Bot Responses (14m)**
A quick refresher on JSON structure, as it's the language the Telegram API uses for all communication.

Core Bot Logic and Interactions

- **Handling Incoming Messages with PHP (22m)**
Write the code to receive and parse user messages sent to your bot.
- **Sending Your First Reply: Plain Text and Formatting (18m)**
Learn how to construct and send a simple text response back to the user, including bold and italic formatting.
- **Processing User Commands (/start, /help) (25m)**
Implement a system to recognize and react to specific commands, creating the backbone of your bot's functionality.
- **Building Interactive Keyboards (Reply and Inline) (30m)**
Guide to creating buttons that make your bot easier to use and more engaging for your audience.
- **Managing Chat State with Sessions (28m)**
A practical approach to remembering user progress in a multi-step conversation, like a registration form.
- **Sending Media: Images, Audio, and Documents (20m)**
Learn how to send more than just text. We'll cover sending photos and files from local or remote URLs.
- **Handling Callback Queries from Inline Buttons (26m)**
Understand how to process button clicks without sending a new message, keeping the chat clean.
- **Error Handling and Logging for Reliability (16m)**
Implement simple logging to track issues and ensure your bot runs smoothly without crashing.
- **Parsing Complex Messages (Locations, Contacts) (21m)**
Learn to handle special message types like user-shared locations or contact information.

Webhooks and Server-Side Logic

- **Setting Up a Secure Webhook Endpoint (32m)**
A complete guide to writing the PHP file that will receive updates from Telegram securely.
- **Verifying Webhook Requests (Security Check) (12m)**
Ensure that incoming requests are actually from Telegram and not a malicious actor.
- **Deploying Your Bot to a Live Server (24m)**
Step-by-step instructions for uploading your bot files to a web host and making them live.
- **Configuring SSL for Telegram Webhooks (19m)**
Why Telegram requires an HTTPS URL and how to set up an SSL certificate on your server.
- **Using a PHP Library to Simplify Development (15m)**
An introduction to a popular Telegram Bot SDK for PHP to speed up your workflow.
- **Real-World Case: Building a 'Contact Us' Bot (35m)**
Apply your skills to build a practical bot that collects user feedback and sends it to an admin.
- **Problem-Solving Session: Debugging Webhook Issues (11m)**
Common errors when setting up webhooks and how to solve them using logs and Telegram's API info.

Advanced Bot Features and Data Management

- **Connecting Your Bot to a MySQL Database (30m)**
Learn how to store user data, settings, or conversation history persistently.
- **Creating a Simple FAQ Bot with Database Lookups (28m)**
Build a bot that answers frequently asked questions by searching a database for keywords.
- **Implementing User Authentication Flow (32m)**
A step-by-step guide to creating a secure login process within Telegram for your services.
- **Scheduling Messages and Notifications (20m)**
Use server cron jobs to send automated messages to users at specific times.
- **Handling Group Chats and Mentions (23m)**
Configure your bot to work effectively in group environments, responding to mentions and specific messages.
- **Building an Admin Panel for Bot Management (38m)**
Create a simple web interface to manage bot content or view user stats without touching the code.
- **Internationalization (i18n): Supporting Multiple Languages (17m)**
Techniques for making your bot respond in different languages based on user preference.
- **Optimizing for Performance and Scalability (14m)**
Tips on making your bot faster and ready to handle many users simultaneously.
- **Interactive Project: Build a Polling Bot (40m)**
A hands-on project where you'll build a bot that creates and manages polls for your users.

Deployment, Maintenance, and Next Steps

- **Using Environment Variables for Configuration (13m)**
A professional way to manage API keys and database credentials outside your code.
- **Version Control with Git for Your Bot Project (16m)**
How to track changes, collaborate with others, and safely deploy updates.

- **Setting Up a CI/CD Pipeline for Automated Deployment** (25m)
An advanced lesson on automating the deployment process when you push new code.
- **Monitoring Your Bot's Health and Uptime** (10m)
Simple methods to check if your bot is online and responding to pings.
- **Handling Rate Limits and API Errors** (18m)
What to do when Telegram limits your requests and how to build a robust retry mechanism.
- **Planning for Future Updates and Features** (9m)
A checklist for adding new features without breaking existing functionality.
- **Exploring the Telegram Bot Ecosystem** (12m)
Learn about other tools, libraries, and communities that can help you improve your bot.
- **Final Project: A Multi-Functional Customer Service Bot** (38m)
Synthesize all your skills to create a bot that handles FAQs, collects feedback, and notifies an admin.
- **Course Wrap-Up and Where to Go Next** (6m)
A brief review of what you've accomplished and suggestions for further learning in PHP and Telegram.
- **Bonus: Accepting Payments via Telegram Bot** (29m)
A practical overview of integrating a payment gateway to sell products or services directly in the chat.

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