

# Functions (Fission)

This guide aims to help you get started with Hogwarts Functions (Fission). After following this guide, you should be able to create, test, and deploy your first Function on the Hogwarts platform!

You can view the functions and create your own on Spellbook. Look for the f(x) icon!

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## Vocabulary

Before starting with Fission, here are a few Fission specific concepts you should know about:

### ▼ Serverless Framework

A framework for building, packaging, and deploying applications without having to spin up your own REST API. This allows you as the user to develop your code without worrying about any of the infrastructure to support it!

### ▼ Functions

A Fission Function is what Fission is executing, which in Hogwart's case is the code you develop. These functions are built with the [template](#) provided. Functions are then pointed to an entry point that defines the main method of your function. These functions are all based in [Flask](#).

It is important to note, these functions are stateless.

### ▼ Triggers

The invocation of functions is controlled by what is called, Triggers. This trigger in Hogwarts is a GET, PUT, POST, PATCH, or DELETE request to your function. Once that request is called, either through the browser or otherwise, your function will be run. You can capture these requests via the Flask library.

### ▼ Environment

Fission functions can be run in the Hogwarts Pyspark Python environment and have access to all the libraries that are within it. Extra libraries can be installed with the requirements.txt file in the template.

Extra versions of the Python environment are available: Python 3.7, 3.8, and 3.9. These do not come with preinstalled packages and all packages required by your function will need to be in the requirements.txt.

## Creating your Function

The basics for creating your initial Python Function are the following:

### ▼ 1. Clone template

There is a [template](#) repository that you can use to get started. If your repository is inside the CCCS Github, you are ready to go. If you are creating the function under another group or your user, you must allow `sa-spellbook` as a collaborator and message in the Microsoft [Team's channel](#) to get this approved.

## ▼ 2. Authentication

Built into the Python environment is an authorization package that allows you to control access to the function. The wrapper function defaults to ALPR members but can be any valid Azure security group ID.

```
1 from hogwartsfission import auth
2
3 @auth.requires_auth()
4 def main():
5     return "You have ALPR access!"
```

### Custom azure Security Group

```
1 from hogwartsfission import auth
2
3 AZURE_SEC_GROUP = "abcdef-1234-ghijk-567890"
4
5 @auth.requires_auth(AZURE_SEC_GROUP)
6 def main():
7     return "You are in my custom security group!"
```

Note: By default, all functions deployed in U are restricted to the hogwarts-unclass-users-sg and all functions deployed in PB are restricted to the ALPR group.

## ▼ 3. Logging

When logging in the Spellbook Functions environment, you must use the flask logger as it does not support `print()` for logging. To do this, import `current_app` from flask.

```
1 from flask import current_app
2
3 def main():
4     current_app.logger.info("This is a log message")
5     return "Hello, World"
```

## ▼ 4. Deploy your function

When creating a function, you will be required to fill out the following information.

CREATE

CANCEL

Name

This name must be unique, consist of only lowercase alphanumeric characters and hyphens, and should not exceed 250 characters.

Description

Function Path

Entrypoint

Repository

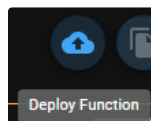
Fission Environment

Classification

Unclassified

SUBMIT

More information regarding these fields is in the `How to Get Started` prompt on the right side of the screen [here](#). After creating your function, you will have to deploy it to enable it via this button:



## Testing your Function

Here is how to test your Function

### Testing

After you have deployed your function, logs will begin to appear as Python validation and logging information become available. This will be shown in Spellbook on the right-hand side after deploying.

These logs can be filtered and searched via time queries shown below.

Last

15

Minutes

↺

## Examples

To quick start your Function journey, the Hogwarts team offers a repository containing Function templates that can help you start your next Function.

[Function Examples](#)

## Feedback

We are always looking to improve our documentation. If you encountered any obstacles while going through this guide, feel free to reach out to us through our [Microsoft teams support channel](#).

## More information & links

### Official docs

- [Fission Concepts](#)
- [More Fission Functions](#)