

A Micro Project report on

**INSTALL PACKAGES AND EXPLORE USING PIP**

Submitted to the CMR Institute of Technology in partial fulfillment of the requirement for  
the award of the Laboratory of

**Python Programming Lab**

of

**Il-B.Tech. I-semester**

in

**Computer Science and Engineering Department**

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# CMR INSTITUTE OF TECHNOLOGY

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### CERTIFICATE

This is to certify that a Micro Project entitled with: "INSTALL PACKAGES  
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In partial fulfillment of the requirement for award of the Python Programming Lab of  
II-B.Tech I- Semester in CSE towards a record of a bonafide work carried out under our  
guidance and supervision.

Signature of Faculty

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## INDEX PAGE

S.NO	CONTENTS	PAGE NO
1	INTRODUCTION	5
2	PROCEDURE	7
3	REQUIREMENTS	8
4	IMPLEMENTATION	9
5	APPLICATIONS	13
6	RESULTS	15
7	CONCLUSION	16
8	REFERENCE	17

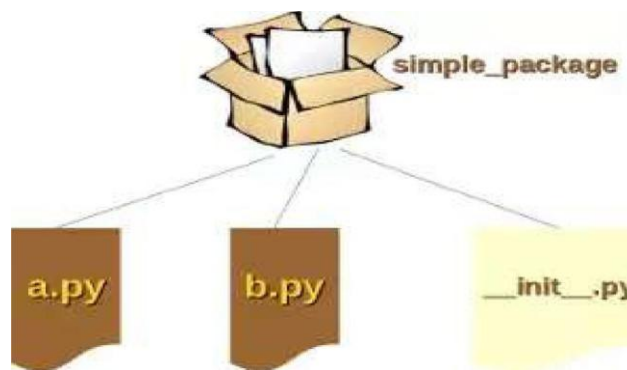
## INTRODUCTION:

### Packages

Packages are a way to organize related classes, interfaces, and sub-packages. They provide a unique namespace for each type they contain, so that types from different packages will never have the same name. Packages also provide access control, so that classes in one package may have access to classes in another package, depending on the package's visibility settings.

Packages are collections of related code, data, and resources that are used to add functionality to a software program. Packages are commonly used to organize and

distribute software programs and libraries of code, making them easier to find, use, and maintain. They can also be used to organize and share data sets, documents, images, and other resources.



Examples of packages include: Microsoft Office, Adobe Creative Suite, Apple iWork, Norton Antivirus, McAfee Antivirus, Adobe Acrobat, Microsoft Visual studi, Autodesk AutoCAD, Corel Draw, MATLAB

## Request

The request is a popular Node.js package for making HTTP requests. It allows you to make different types of HTTP requests (GET, POST, PUT, DELETE, etc.) and receive responses from web servers. It is designed to be simple and easy to use and can be used for a variety of different projects and applications.

Request is a Python HTTP library that allows you to send HTTP/1.1 requests using Python. It is an easy-to-use library with a lot of features ranging from passing parameters in URLs to sending custom headers and SSL Verification. It also allows you to access the response data of Python in the same way. It is powered by urllib3 and httplib and is extremely useful for making HTTP requests in Python.

## Flask

Flask is a Python web framework used for creating web applications. It is a micro web framework, meaning it is lightweight and easy to use. It provides developers with tools, libraries, and modules to help them develop web applications quickly and efficiently. Flask is an open-source project and is free to use. It is based on the Werkzeug WSGI toolkit and Jinja2 template engine.

It has no database abstraction layer, form validation, or any other components where pre-existing third-party libraries provide common functions. Flask supports extensions that can add application features as if they were implemented in Flask itself. Extensions exist for object-relational mappers, form validation, upload handling, various open authentication technologies and several common framework related tools.

## PIP

Pip is a package management system used to install and manage software packages written in Python. It stands for "Pip Installs Packages" and is a way to get the latest Python software packages. It is similar to other package managers such as Apt, Homebrew, and yum, but is designed specifically for Python-based software. Pip allows users to install packages from the Python Package Index (PyPI) or from other indexes. It also allows users to easily update or remove packages. Pip provides a simple user interface that can be used to install, uninstall, and search for packages from the command line. Additionally, pip can be used to create virtual environments, manage dependencies, and more.

## PROCEDURE:



## How To Install Pip

1. Download the get-pip.py file from the following link and store it in the same directory as python is installed.

<https://bootstrap.pypa.io/get-pip.py>

2. Open a command prompt and navigate to the directory where you have downloaded the get-pip.py file.
3. Run the following command to install pip.

`python get-pip.py`

4. After successful installation, a message indicating the location of the pip executable file will be displayed.
5. Verify the installation by running the following command

### REQUIREMENTS:

- Python of latest version
- Windows latest version 10/11 required

### IMPLEMENTATION:

## Commands Used in Pip

➤ install: installs a package from the Python Package Index (PyPI) ➤ list: list installed packages ➤ show: show information about a given package ➤ search: search PyPI for packages ➤ uninstall: removes a package from the system ➤ freeze: outputs installed packages in requirements format ➤ wheel: builds a wheel package ➤ hash: generates a hash of a given package ➤ help: shows help information for the pip command To install a package using pip, we can use the following command:

```
pip install <package_name>
```

To install a package using pip, we can use the following command:

```
pip install <package_name>
```

## Explore Request Pip

PIP is a command-line tool used to install and manage Python packages. To explore a request using pip, you will need to use the pip search command

followed by the name of the request. For example, if you wanted to explore the requests library, you would use the command "pip search requests". This will give you a list of related packages that you can use with requests.

- `python -m pip show requests`
- `pip install --upgrade requests`
- `pip install requests==2.6.0`
- `pip uninstall Requests`

## Output

- Name: requests
- Version: 2.26.0
- Summary: Python HTTP for Humans.
- Home-page: <https://requests.readthedocs.io>

## Explore Flask

## Pip

First, make sure you have pip installed on your system. If not, you can install it from the Python Package Index.

Once pip is installed, you can use it to install Flask. To do this, open a terminal window and type the following command:

`pip install Flask`

Once Flask is installed, we can use it to create a basic web application. To do this, create a directory for your application, and then create a file called "app.py" inside the directory. In the app.py file, add the following code:

```
from flask import Flask
app = Flask(__name__)
@app.route('/') def hello
world(): return 'Hello,
World!' if __name__ == '__
main ':app.run()
```

Save and close the file. Then, open a terminal window, change to the directory that contains your application, and type the following command: `python app.py`

This will launch your Flask application. You can then open your web browser and navigate to `http://localhost:5000/` to view the application.

## Install Packages      PIP

1. Install the request package using pip:  
`pip install request`
2. Install the flask package using pip:

## APPLICATIONS:

### Uses Of Request Package

The Request package is a popular and easy to use module for making HTTP requests in Node.js. It can be used to make requests to any HTTP endpoint, including REST APIs. It supports a variety of HTTP methods and can be used to send and receive data in a variety of formats, such as JSON, XML, and HTML.

Request simplifies the process of making API calls, making it easier for developers to access and work with remote data sources. Request can be used for tasks such as making API calls, downloading files, and making authenticated requests. The Request package is a popular Node.js library that is used to make

HTTP requests. It is a powerful tool for making requests to web services, and can be used for a variety of tasks such as:

- Retrieving data from APIs
- Downloading files from remote servers
- Automating web scraping
- Generating HTTP requests for testing
- Creating custom HTTP headers

### Uses Of Flask Package

- It offers an easy way to develop web applications.
- It is lightweight and easy to maintain.
- It provides a development server and debugger.
- It is extensible and offers support for a variety of plugins.
- It has a built-in development web server.
- It is based on the Python programming language.
- It is compatible with many popular databases and web frameworks. ● It is open-source and free.

### Uses of Pip

- 1 . Pip is a package installer for Python. It allows users to install and manage packages and their dependencies.
2. It simplifies the process of installing and managing packages, as well as their dependencies.
3. It makes it easier to keep track of installed packages and their versions.
4. It also allows users to install packages from various sources, such as the Python Package Index (PyPI) and third-party repositories.
5. It also enables users to create virtual environments, which help to isolate packages and their dependencies from the main Python installation.
6. It is also used to upgrade existing packages and to uninstall packages that are no longer needed.

RESULT:

```
Terminal: Local +
(venv) C:\Users\USER\PycharmProjects\test1>python -m pip install Flask
Collecting Flask
  Using cached Flask-1.1.2-py2.py3-none-any.whl (94 kB)
Collecting click>=5.1
  Using cached click-7.1.2-py2.py3-none-any.whl (82 kB)
Collecting Jinja2>=2.10.1
  Using cached Jinja2-2.11.3-py2.py3-none-any.whl (125 kB)
Collecting Werkzeug>=0.15
  Using cached Werkzeug-1.0.1-py2.py3-none-any.whl (298 kB)
Collecting itsdangerous>=0.24
  Using cached itsdangerous-1.1.0-py2.py3-none-any.whl (16 kB)
Collecting MarkupSafe>=0.23
  Using cached MarkupSafe-1.1.1-cp39-cp39-win_amd64.whl (16 kB)
Installing collected packages: MarkupSafe, Werkzeug, Jinja2, itsdangerous, click, Flask
Successfully installed Flask-1.1.2 Jinja2-2.11.3 MarkupSafe-1.1.1 Werkzeug-1.0.1 click-7.1.2 itsdangerous-1.1.0

(venv) C:\Users\USER\PycharmProjects\test1>
```

```
管理员: C:\Windows\system32\cmd.exe - python
Microsoft Windows [版本 6.1.7601]
版权所有 (c) 2009 Microsoft Corporation。保留所有权利。

C:\Users\shan>E:
E:\>pip install requests
Collecting requests
  Retrying <Retry(total=4, connect=None, read=None, redirect=None, status=None)>
  after connection broken by 'ReadTimeoutError("HTTPSConnectionPool(host='pypi.org',
  port=443): Read timed out. (read timeout=15)")': /simple/requests/
  Could not find a version that satisfies the requirement requests <from version
  >
  No matching distribution found for requests
  You are using pip version 19.0.3, however version 19.3.1 is available.
  You should consider upgrading via the 'python -m pip install --upgrade pip' comm
  and.

E:\>python
Python 3.7.4 <tags/v3.7.4:e09359112e, Jul 8 2019, 19:29:22> [MSC v.1916 32 bit
  <Intel>] on win32
  Type "help", "copyright", "credits" or "license" for more information.
  >>> _
```



## CONCLUSION

The conclusion of the pip, request and flask packages is that they are all powerful tools to create, manage and deploy Python applications. Pip is a package manager for Python, allowing users to download and install packages from the Python Package Index. Request is a Python library for making HTTP requests, and Flask is a web framework for creating web applications in Python. All three packages enable developers to easily create, deploy and manage Python applications.

PIP, Request, and Flask are all incredibly powerful and versatile tools that can be used to build websites, APIs, and applications. PIP is used for package management and installation, Request is used for making HTTP requests, and Flask is a popular Python web framework. Together, these tools can help developers create powerful applications quickly and easily. Pip is a package manager for Python, Request is a library for making HTTP requests, and Flask is a web development framework. Together, these packages provide developers with a powerful set of tools to quickly and easily create web applications.

## REFERENCE

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