

# How to create virtual environment using pip and install the required libraries?

To create a new virtual environment using `pip` and install the packages listed in a `requirements.txt` file, follow these steps:

Step 1: Install virtualenv (if not already installed)

If you don't have `virtualenv` installed, you can install it using `pip`. Open your terminal or command prompt and run the following command:

```
1 pip install virtualenv
```

Step 2: Create a new virtual environment

Once `virtualenv` is installed, you can create a new virtual environment. Navigate to the directory where you want to create the virtual environment and run the following command:

```
1 virtualenv venv
```

Here, `venv` is the name of the virtual environment. You can use any name you prefer.

Step 3: Activate the virtual environment

To start using the virtual environment, you need to activate it. The activation steps differ depending on your operating system:

For Windows:

```
1 venv\Scripts\activate
```

For macOS and Linux:

```
1 source venv/bin/activate
```

Step 4: Install packages from requirements.txt

Now that your virtual environment is active, you can install the packages listed in the `requirements.txt` file. Make sure the `requirements.txt` file is present in your current working directory or provide the full path to the file.

```
1 pip install -r requirements.txt
```

This command will install all the packages specified in the `requirements.txt` file into your virtual environment.

Step 5: Deactivate the virtual environment (optional)

When you're done working in the virtual environment and want to switch back to your system's global Python environment, you can deactivate the virtual environment:

```
1 deactivate
```

That's it! You've now created a new virtual environment using `pip` and installed the packages from the `requirements.txt` file into it. You can activate and deactivate the virtual environment whenever you need to work on your project.