

INSTALLATION GUIDE FOR WINDOWS
Installing and Downloading Software used in Problem Solving, Python Programming, and
Video Games

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Introduction

To complete this course, you will need the following:

- Python
- pygame
- Wing integrated development environment (IDE)
- uagame.py
- Play Game files

If you are experiencing problems with the Virtual Machine or prefer not to use it, you can install the above.

Installing Python

1. Download Python 3.6.X or Python 3.7.X for Mac OS X from: python.org/downloads/ (You will need to scroll down to see the different release versions)

Looking for a specific release?
Python releases by version number:

Release version	Release date		Click for more
Python 3.5.9	Nov. 2, 2019	Download	Release Notes
Python 3.5.8	Oct. 29, 2019	Download	Release Notes
Python 2.7.17	Oct. 19, 2019	Download	Release Notes
Python 3.7.5	Oct. 15, 2019	Download	Release Notes
Python 3.8.0	Oct. 14, 2019	Download	Release Notes
Python 3.7.4	July 8, 2019	Download	Release Notes
Python 3.6.9	July 2, 2019	Download	Release Notes
Python 3.7.3	March 25, 2019	Download	Release Notes

[View older releases](#)

Licenses

All Python releases are [Open Source](#). Historically, most, but not all, Python releases have also been GPL-compatible. The [Licenses](#) page details GPL-compatibility and Terms and Conditions.

Sources

For most Unix systems, you must download and compile the source code. The same source code archive can also be used to build the Windows and Mac versions, and is the starting point for ports to all other platforms.

Alternative Implementations

This site hosts the "traditional" implementation of Python (nicknamed CPython). A number of alternative implementations are available as well.

History

Python was created in the early 1990s by Guido van Rossum at Stichting Mathematisch Centrum in the Netherlands as a successor of a language called ABC. Guido remains Python's principal author, although it includes many contributions from

2. Once you have selected a version of Python 3.6.X or 3.7.X, scroll to the bottom of the page to download either “Windows x86-64 web-based installer”:

Both python.org installer variants include private copies of OpenSSL. Please carefully read the [Important Information](#) displayed during installation for information about SSL/TLS certificate validation and the `Install Certificates.command`. **Changed in 3.7.4** OpenSSL has been updated from 1.1.0 to 1.1.1.

[Full Changelog](#)

Files

Version	Operating System	Description	MD5 Sum	File Size	GPG
Gzipped source tarball	Source release		1cd071f78ff6d9c7524c95303a3057aa	23126230	SIG
XZ compressed source tarball	Source release		08ed8030b1183107c48f2092e79a87e2	17236432	SIG
macOS 64-bit/32-bit installer	Mac OS X	(Deprecated) for Mac OS X 10.6 and later	cd503606638c8e6948a591a9229446e4	35020778	SIG
macOS 64-bit installer	Mac OS X	for macOS 10.9 and later	20d9540e88c6aaba1d2bc1ad5d069359	28198752	SIG
Windows help file	Windows		608cfa250f8baa11a69bbfcb842c0e0	8141193	SIG
Windows x86-64 embeddable zip file	Windows	for AMD64/EM64T/x64	436b0f803d2a0b393590030b1cd59853	7500597	SIG
Windows x86-64 executable installer	Windows	for AMD64/EM64T/x64	697f7a884e80cca9dff3a77e979b0f8	26777448	SIG
Windows x86-64 web-based installer	Windows	for AMD64/EM64T/x64	b8b6e5ce8c27c20bfd28f1366ddf8a2f	1363032	SIG
Windows x86 embeddable zip file	Windows		726877d1a1f5a7dc68f6a4fa48964cd1	6745126	SIG
Windows x86 executable installer	Windows		cfe9a828af6111d5951b74093d70ee89	25766192	SIG
Windows x86 web-based installer	Windows		ea946f4b76ce63d366d6ed0e32c11370	1324872	SIG

3. Locate the .exe file in your computer. It should be called something like “python-3.7.5-amd64.exe”.

4. Double click on the .exe file. The following installer should open:

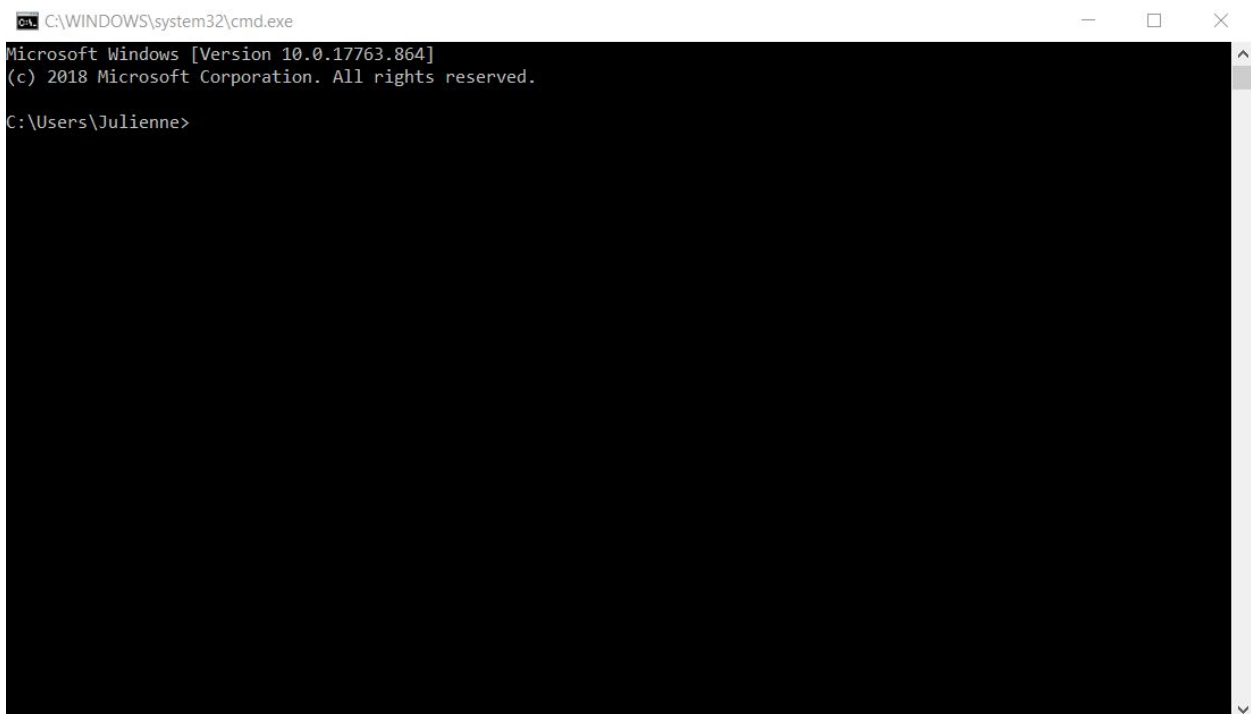


Make sure to enable "Add Python 3.7 to PATH" and select Install Now

5. After the installation is complete, you can select "Disable path length limit" if you wish; otherwise, select Close.



6. To double check we installed Python, open up Command Prompt or simultaneously press Windows+R keys and type cmd and hit ENTER



7. Type: `python --version` and hit ENTER


8. The output should tell you the Python version you installed. We have successfully installed Python!

Installing pygame

1. Check if you have pip installed by typing into the terminal: `pip --version` and ENTER. Python 3.4+ should come with pip installed, but if you do not have it, type the command: `py -3 -m ensurepip`
2. On the terminal, type: `pip3 install pygame` and hit ENTER. Note that if you receive the following message then you already have pygame installed: `Requirement already satisfied: pygame in ./Library/Python/3.7/lib/python/site-packages (1.9.4)`
3. Once it is done installing, you can check that it is working by typing into the command prompt: `python -m pygame.examples.aliens` and hit ENTER
4. If the game starts, then you have installed pygame successfully!

Installing Wing IDE

1. Download Wing IDE Personal from: <https://wingware.com/downloads>



The screenshot shows the Wingware website's download page for Wing IDE Personal. The header includes the Wingware logo and navigation links: About, Download, Support, Pricing, and Contact. The main content area features the Wing Python IDE logo and the tagline "THE INTELLIGENT DEVELOPMENT ENVIRONMENT FOR PYTHON". Below this, the page is titled "Wing Personal - Version 7.1.3 - Released 2019-11-14". A paragraph describes Wing Personal as a free Python IDE for students and hobbyists, with a link to "Compare Products". Another paragraph states that Wing Personal is free to use for any purpose and does not require a license to run. To the right, under "Download Wing Personal:", there are two green buttons: "Windows Installer 32-bit and 64-bit" and "Windows Zip File 32-bit and 64-bit". Below these buttons are SHA1 hashes. On the left side, there are links for "Tutorial", "Quick Start Guide", and "What's New". Further down, there are links for "Other OSes" (OS X, Linux 64-bit) and "Other Versions" (7.0.4, 6.1.5, 5.1.12, 4.1.14, 3.2.13, all versions). At the bottom, there are links for "Other Products" (Wing Pro, Wing 101) and "Compare Product Features". On the right side, there are links for "Supported OSes", "Supported Python Versions", and "Change Log". At the bottom of the page, there is a footer with copyright information (© 1999-2019 Wingware), social media icons (Twitter, Facebook, LinkedIn, YouTube), and links for "Contact", "Search", "Site Map", and "Terms".

Wingware

About Download Support Pricing Contact

WING PYTHON IDE
THE INTELLIGENT DEVELOPMENT ENVIRONMENT FOR PYTHON

Wing Personal - Version 7.1.3 - Released 2019-11-14

Wing Personal is a free Python IDE designed for students and hobbyists. It omits many features found in Wing Pro. [Compare Products](#)

Wing Personal is free to use for any purpose and does not require a license to run.

Tutorial
Quick Start Guide
What's New

Other OSes: [OS X](#) [Linux 64-bit](#)

Other Versions: [7.0.4](#) [6.1.5](#) [5.1.12](#) [4.1.14](#) [3.2.13](#) [all versions](#)

Other Products: [Wing Pro](#) [Wing 101](#) - [Compare Product Features](#)

Download Wing Personal:

Windows Installer
32-bit and 64-bit

SHA1: b080f31bc8f37ba754a0be3a451b0c760306a51

Windows Zip File
32-bit and 64-bit

SHA1: 4f9c0af86cbb82b31289cb16285518e10037609

[Supported OSes](#)
[Supported Python Versions](#)
[Change Log](#)

Quickstart [HTML](#) [US Letter](#) [A4](#)
Tutorial [HTML](#) [US Letter](#) [A4](#)
Manual [HTML](#) [US Letter](#) [A4](#)
How-Tos [HTML](#) [US Letter](#) [A4](#)

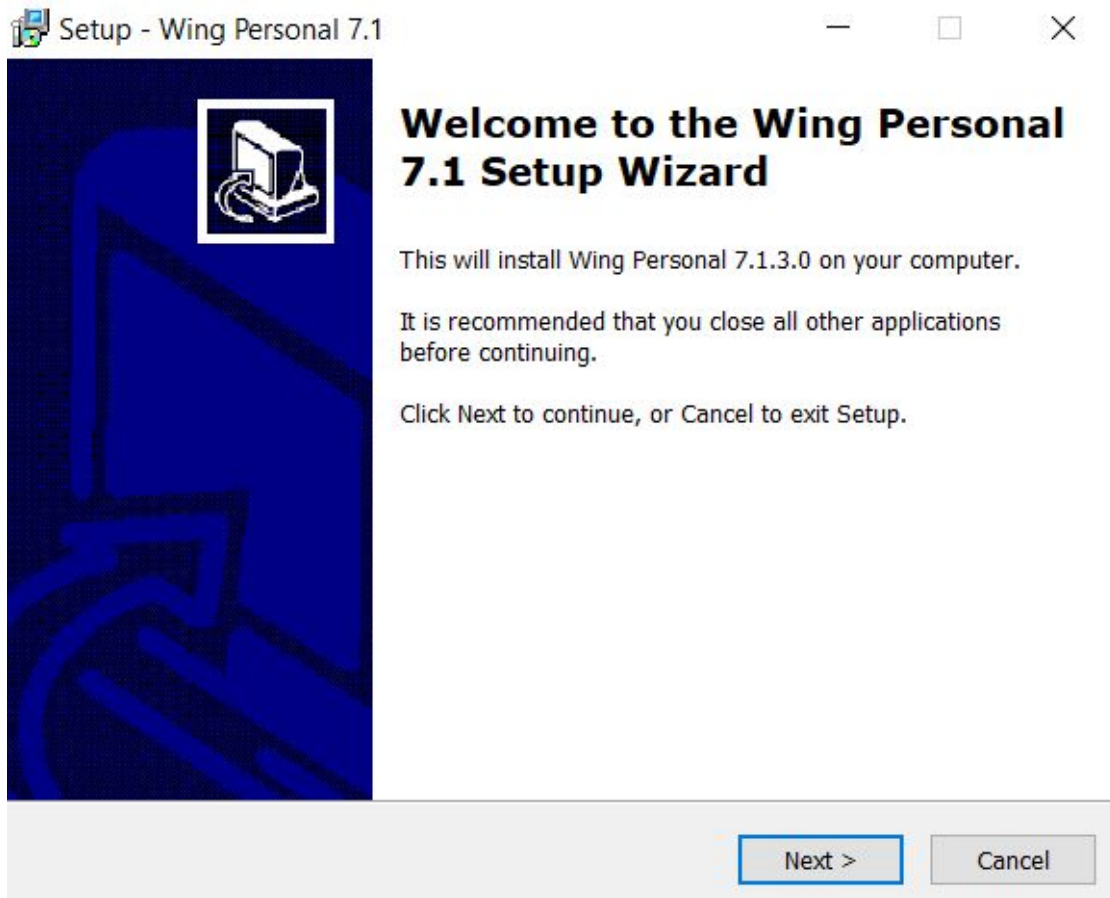
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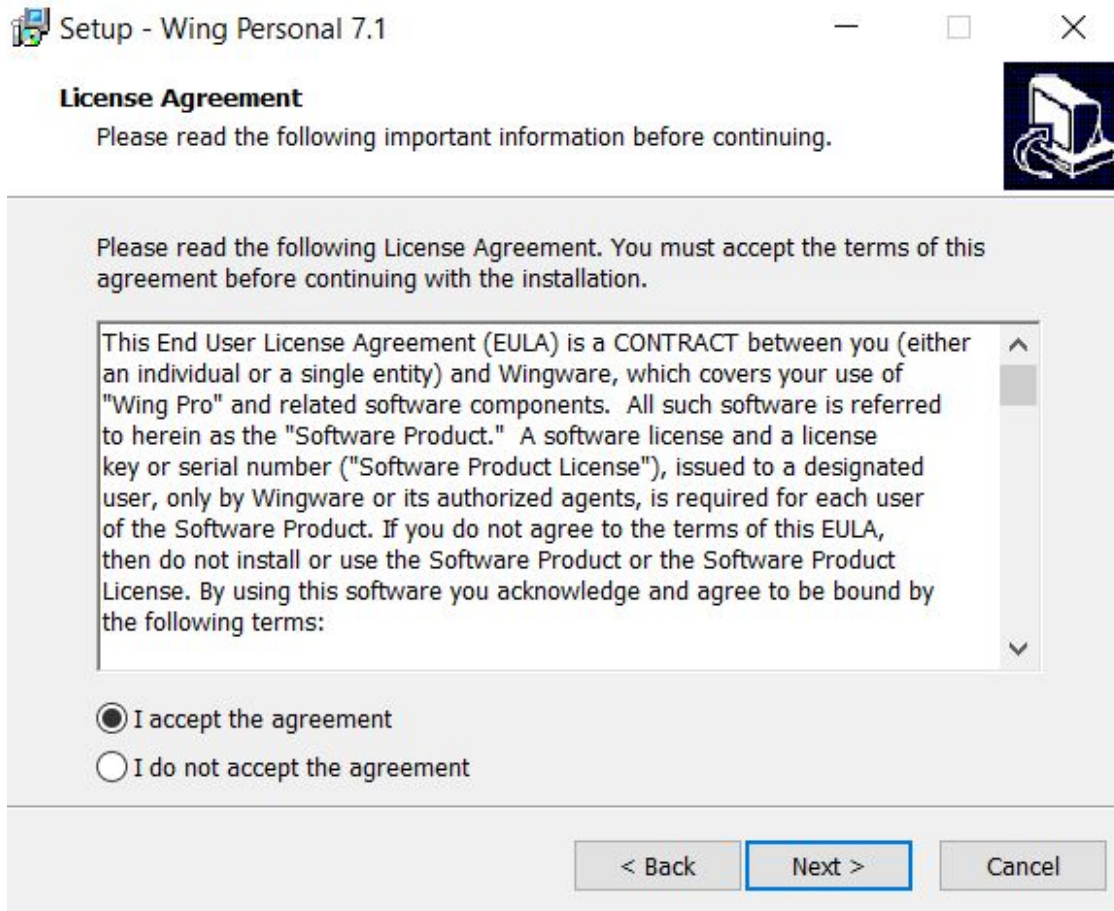
Select Windows Installer

2. Locate the .exe file in your computer. It should be called something like "wing-personal-7.1.3.0.exe"
3. Double click on the .exe file. The following window should open:

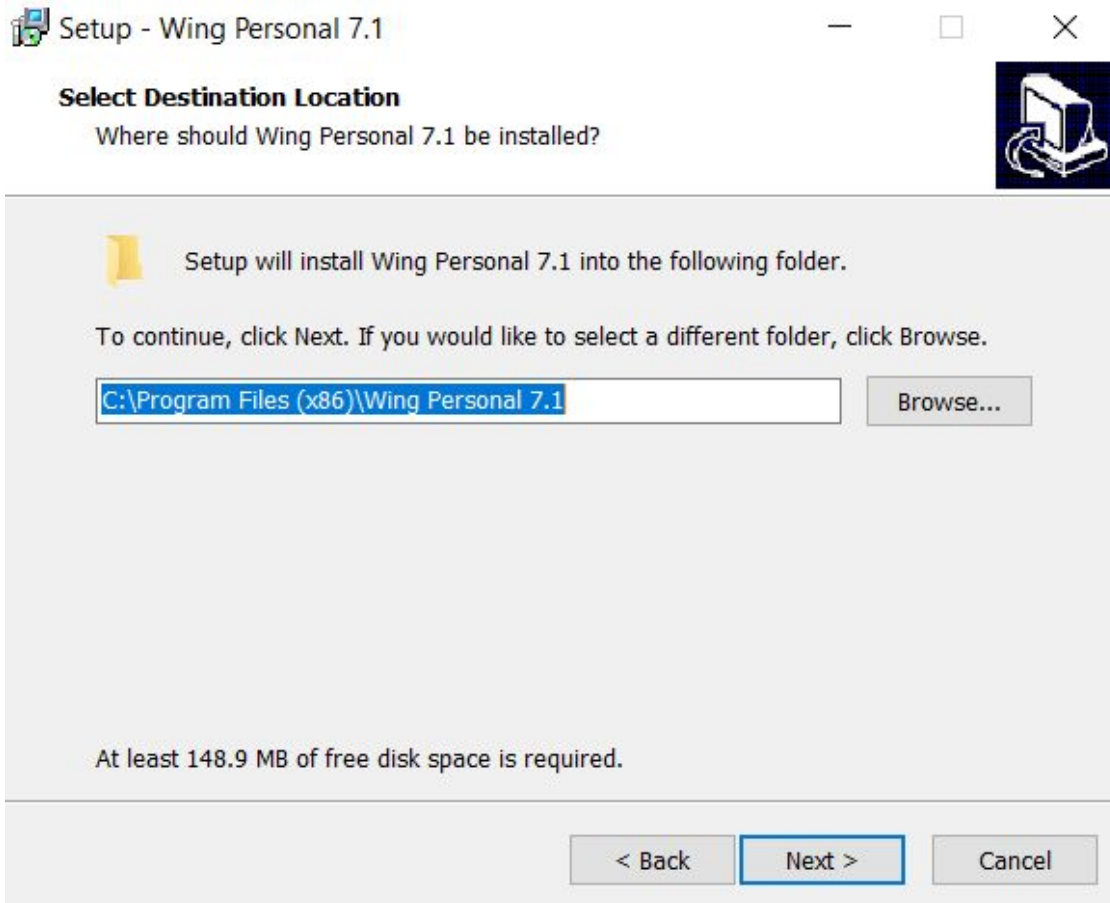


Select Next.

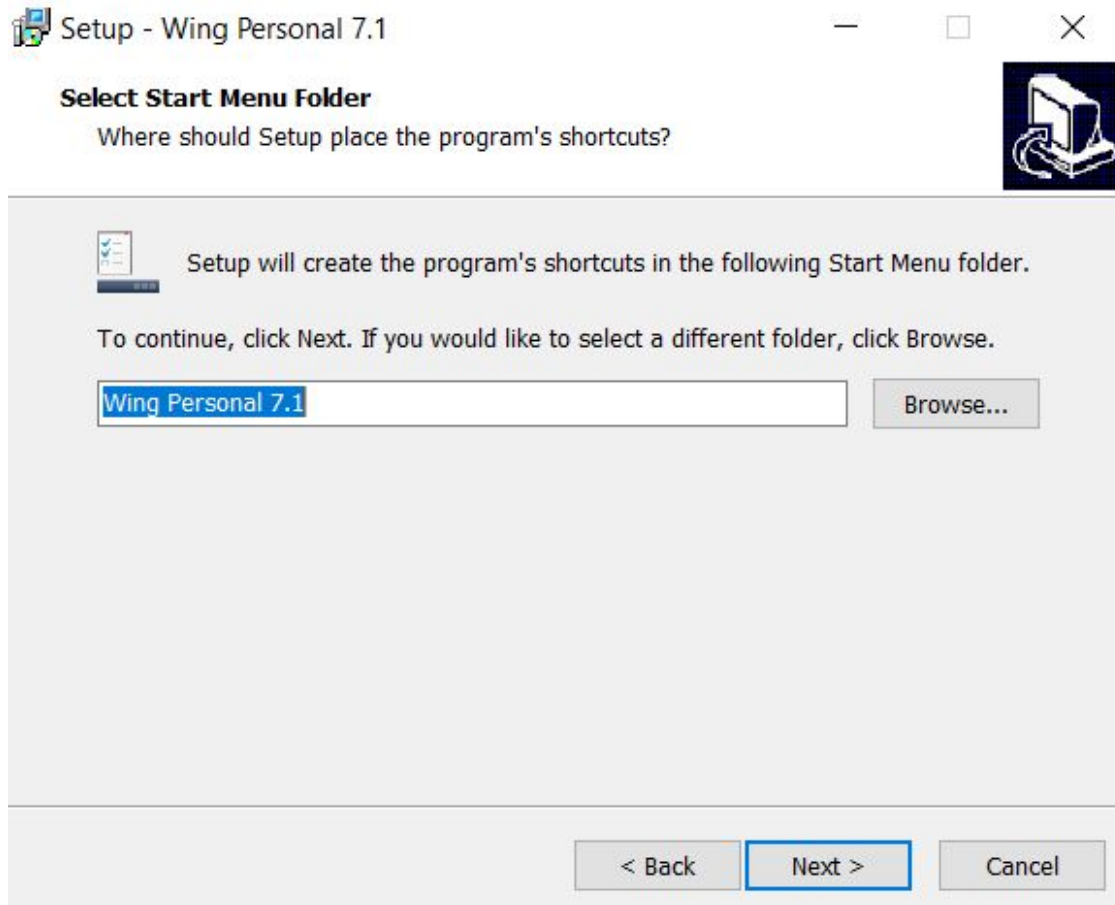
4. Read the License Agreement and select "I accept the agreement". Then select Next.



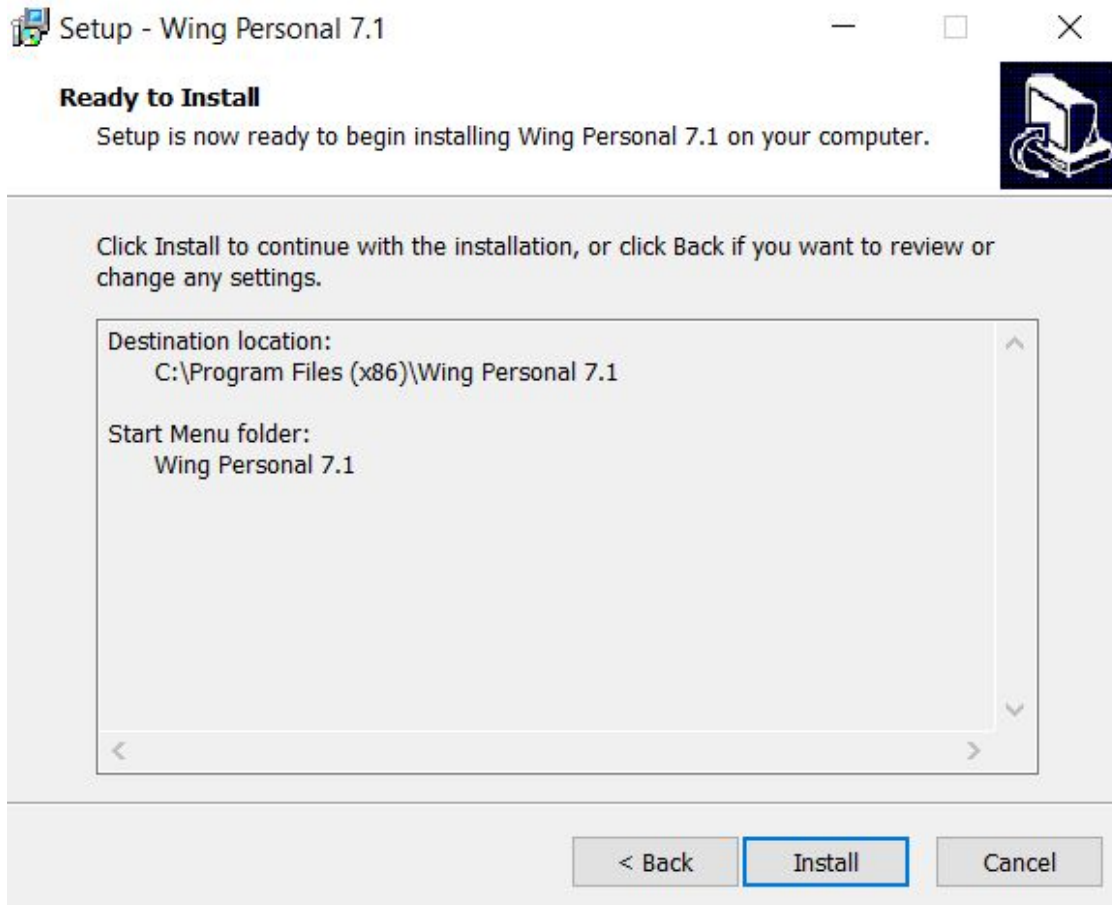
5. Select where you want to install it and select Next.



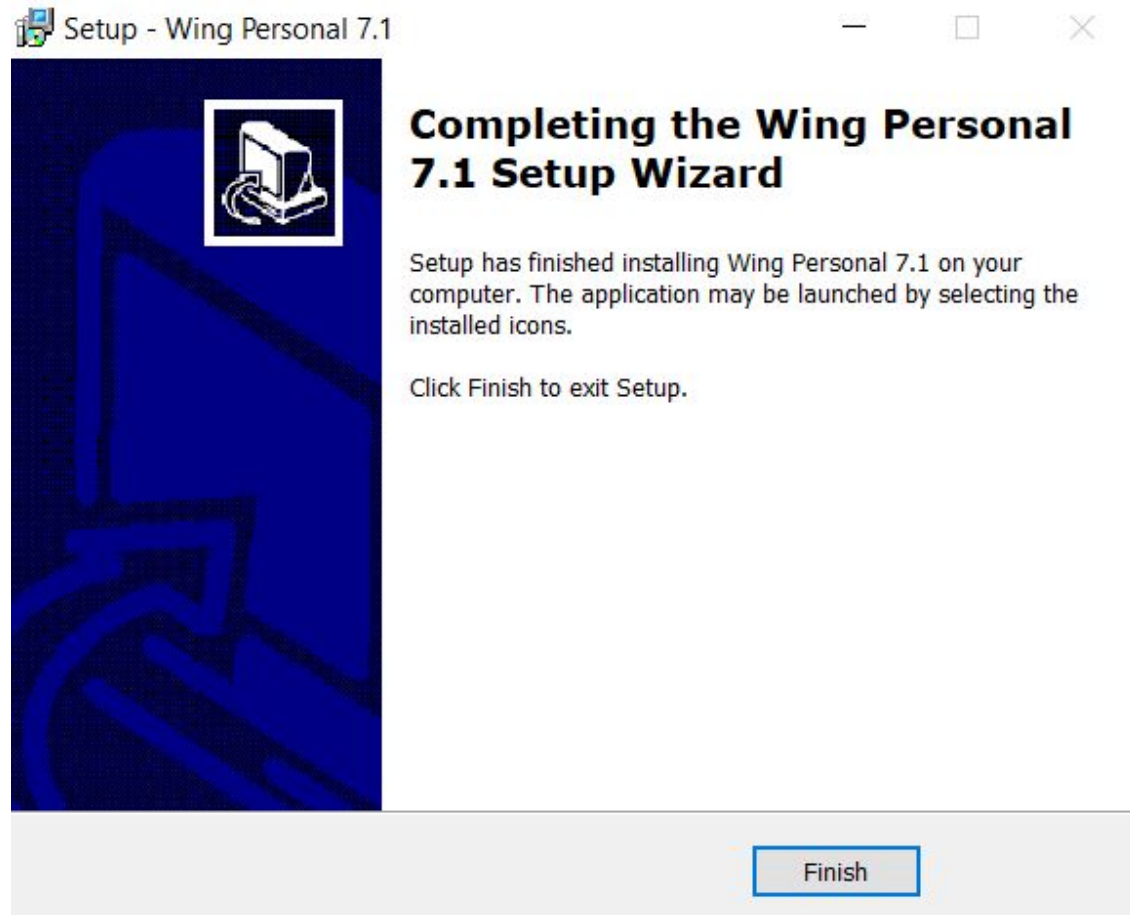
6. Select where to place the program's shortcut and select Next.



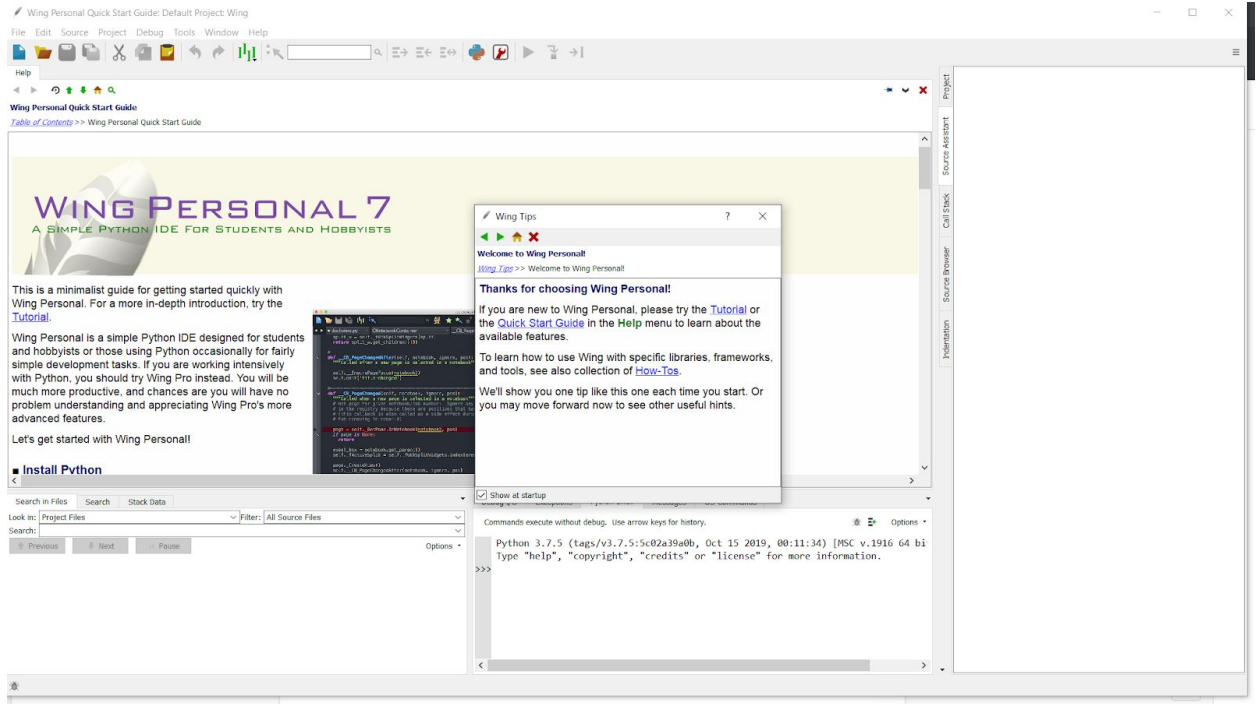
7. Review your settings and select Install.



8. Setup completed installing Wing IDE. Select Finish



9. When first opening the application, a window will appear. Read the License Agreement and select Accept.
10. Open Wing IDE. It should be installed successfully if it opens. You can close the "Wing Tips" window to start writing code!



Downloading uagame.py

1. You can download uagame.py, which we will use throughout the course, under [Resources](#) on the course website
2. Download the uagame.py file by clicking on it at the bottom of the page:

Classmates

Resources

Community Guidelines

PVG Videos Known Issues

Course Virtual Machine Image

The PVG Virtual Machine

Module uagame Documentation and Python File

Play Game Files

Enabling virtualization in BIOS (Windows 10)

Installing the PVG VM on a Windows computer

Readings

Course Info

Course Manager
Staff & Mentors Only

```
52 # Return the int pixel height of the current font.
53
54
55 get_surface():
56     # Return the Pygame.Surface object that represents the
57     # interior drawing surface of the window
58
59 draw_string(string, x, y):
60     # Draw a string in the window using the current font and
61     # colors
62     # - string is the str object to draw
63     # - x is the int x coord of the upper left corner of the
64     #   string in the window
65     # - y is the int y coord of the upper left corner of the
66     #   string in the window
67
68 input_string(prompt, x, y):
69     # Draw a prompt string in the window using the current font
70     # and colors. Check keys pressed by the user until an enter
71     # key is pressed and return the sequence of key presses as a
72     # str object.
73     # - prompt is the str to display
74     # - x is the int x coord of the upper left corner of the
75     #   string in the window
76     # - y is the int y coord of the upper left corner of the
77     #   string in the window
78
79 get_string_width(string):
80     # Return the int pixel width of the string using the current
81     # font.
82     # - string is the str object
83
84 update():
85     # Update the window by copying all drawn objects from the
86     # frame buffer to the display.
```

The file uagame.py is available in the course VM. If you need another copy, you can download it here.

uagame.py

3. Save the file into a folder where you will be putting all of your code! Make sure to rename it as “uagame.py” if it has a different name

Downloading play game files

1. You can download the play game files under [Resources](#) on the course website
2. Unzip the files and place them into any folder (preferably a place where you put all your PVG files to keep organized)

[illegible]

Playing game files

1. Recall where you unzipped the play game files. Copy your uagame.py file to this folder. Remember where this directory is located.
2. Open up Command Prompt or simultaneously press Windows+R keys and type cmd and hit ENTER
3. You can see all the files and directories using the command `dir`. You can navigate from directory to directory using the command `cd`
4. To navigate to the appropriate directory to play the games and see the files, you will need to do a sequence consisting of `dir` and `cd`. For example, if my files are located in a folder called Demo, I would run the following sequence of commands: `dir`, `cd Demo`, `dir` (press Enter after each command)

```
D:\Julienne>dir

Directory of D:\Julienne

2020-03-31  10:42 PM    <DIR>        .
2020-03-31  10:42 PM    <DIR>        ..
2020-03-31  10:48 PM    <DIR>        Demo
2020-03-31  10:40 PM    <DIR>        Documents
2020-03-31  10:40 PM    <DIR>        Music
2020-03-31  10:41 PM    <DIR>        Pictures
2020-03-31  09:58 PM    <DIR>        Videos
               0 File(s)              0 bytes
               7 Dir(s)  575,003,602,944 bytes free

D:\Julienne>cd Demo

D:\Julienne\Demo>dir

Directory of D:\Julienne\Demo

2020-03-31  10:48 PM    <DIR>        .
2020-03-31  10:48 PM    <DIR>        ..
2018-04-26  08:37 AM      2,677 Hacking1.py
2018-04-26  08:37 AM      6,909 Hacking2.py
2018-04-26  08:37 AM      7,149 Hacking3.py
2018-04-26  08:37 AM      4,869 Hacking4.py
2018-04-26  08:37 AM      5,707 Hacking5.py
2018-04-26  08:37 AM      6,280 Hacking6.py
2018-04-26  12:52 PM      7,875 Hacking7.py
2018-05-02  04:01 PM      3,801 Poke1.py
2018-05-02  04:01 PM      3,573 Poke2.py
2018-05-02  04:01 PM      4,909 Poke3.py
2018-05-02  04:01 PM      4,900 Poke4.py
2018-05-02  04:01 PM      6,226 Poke5.py
2020-03-31  10:47 PM      7,749 uagame.py
               13 File(s)          72,624 bytes
               2 Dir(s)  575,003,602,944 bytes free

D:\Julienne\Demo>
```

5. The necessary step is to run `cd Demo` and press Enter. This will change the working directory to Demo, which contains the game files.

6. To actually run a game, type python [game file name here]. For example, if I want to run Hacking version 7, I will type python Hacking7.py and press Enter. Note that it is case-sensitive (for example, make sure that capital H is used for Hacking7.py).

```
D:\Julienne\Demo>python Hacking7.py
pygame 1.9.6
Hello from the pygame community. https://www.pygame.org/contribute.html
```

7. When a game is running, the game window will pop up and you will be able to play it!