

인공지능 실습환경 설정

1. Anaconda 설치

다른 python 환경이어도 python 3.8 ver 이상이면
과제 제출에는 문제가 없습니다.



- <https://www.anaconda.com/products/individual>

Anaconda Individual Edition

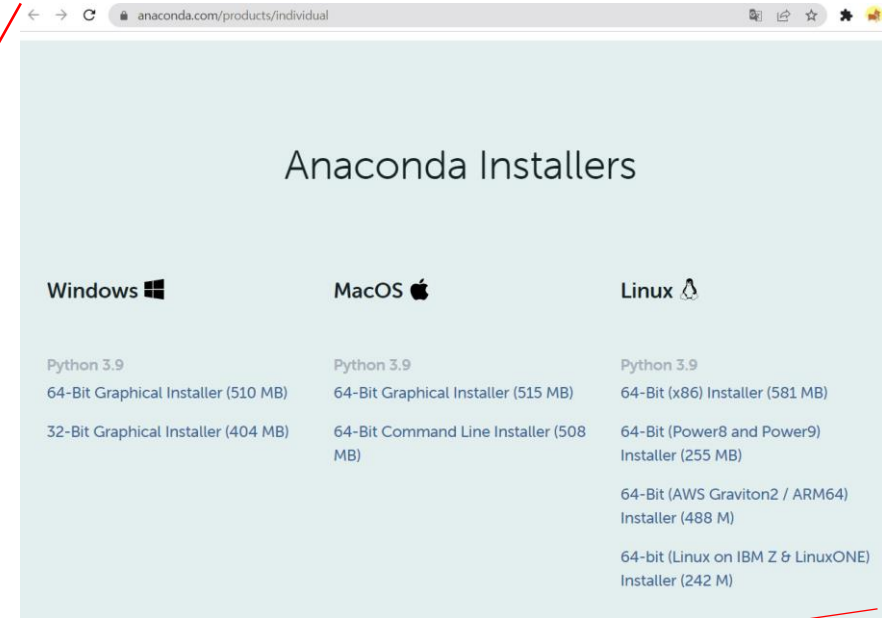
Download 

For Windows

Python 3.9 • 64-Bit Graphical Installer • 510 MB

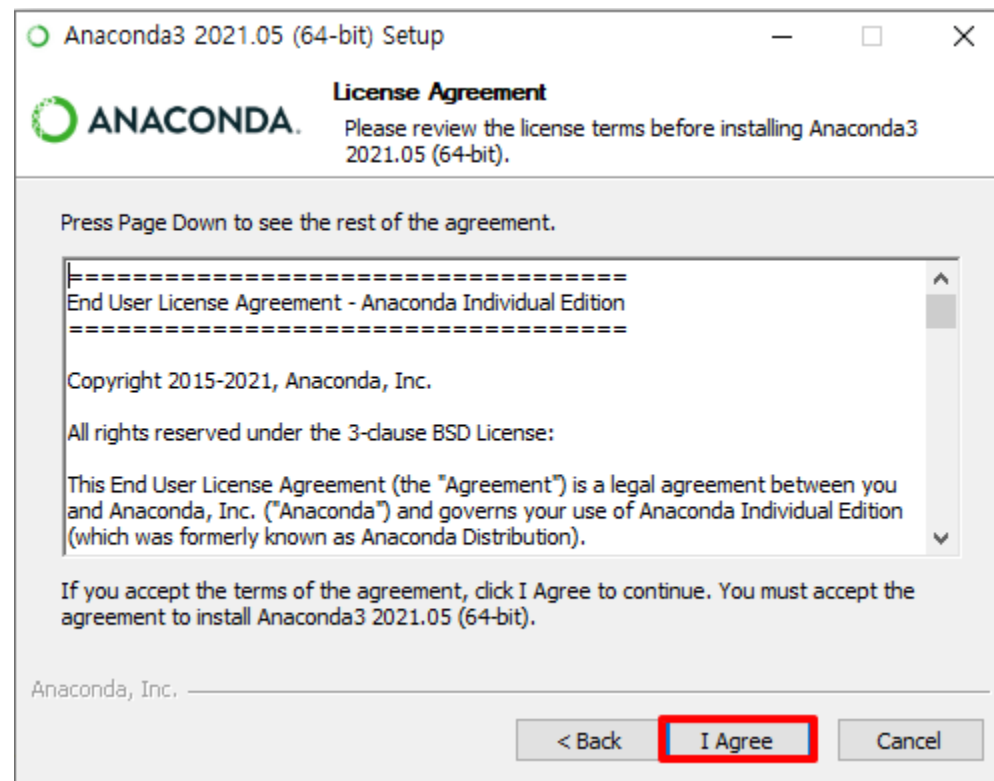
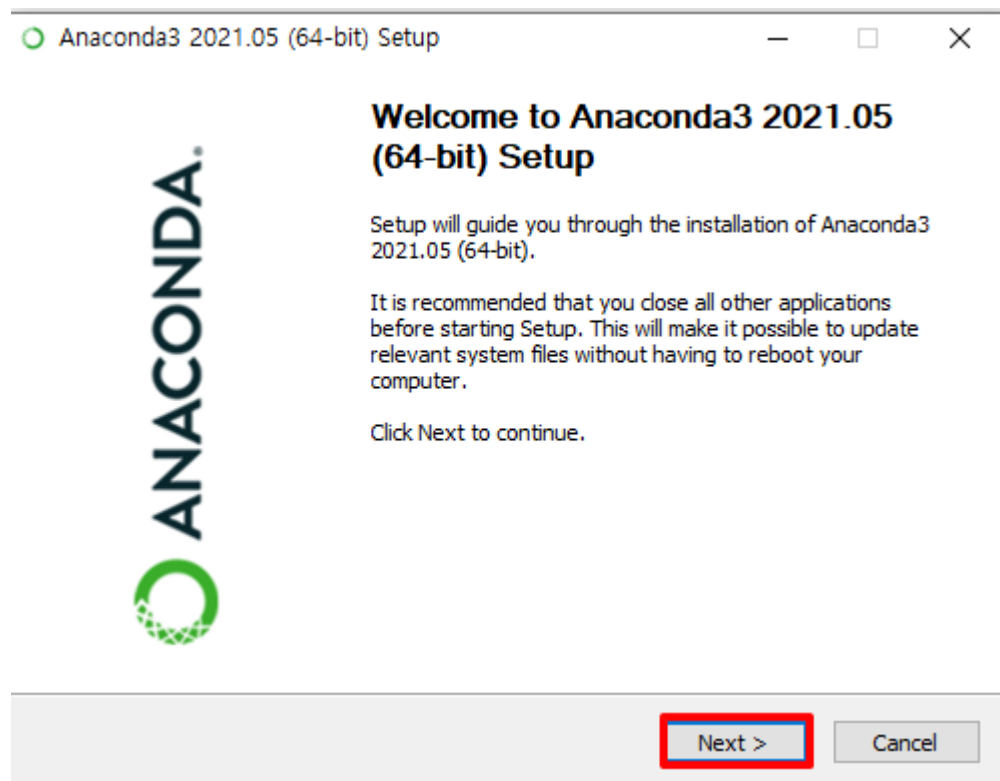
OR

Get Additional Installers

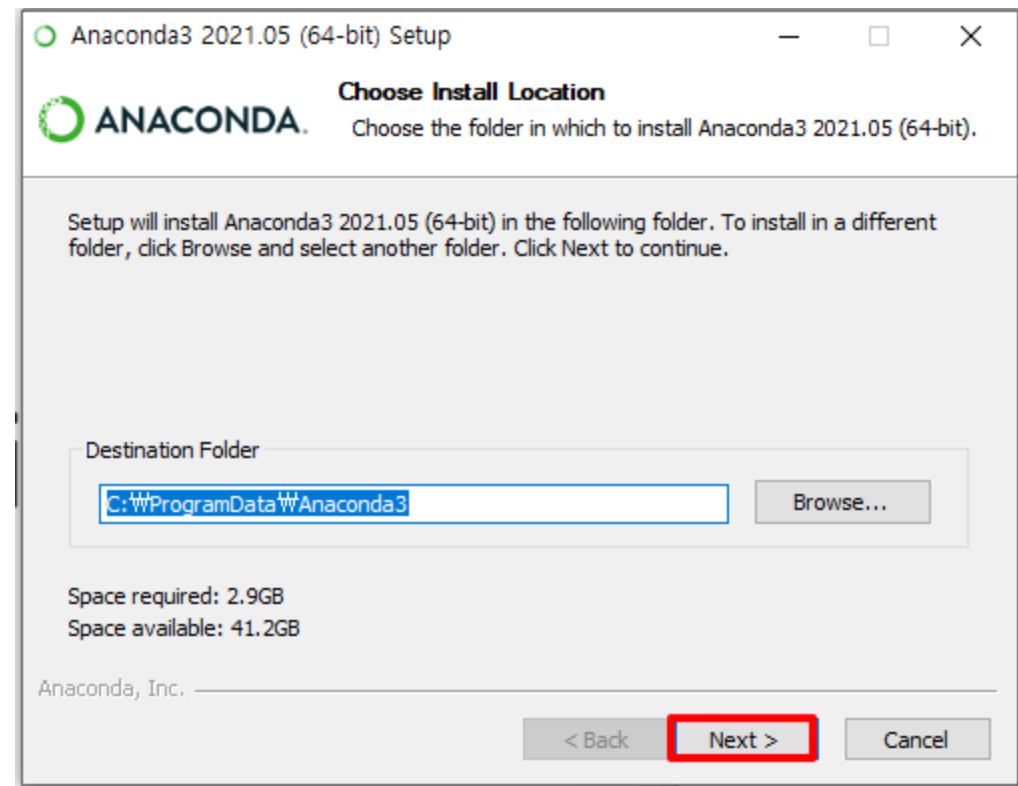
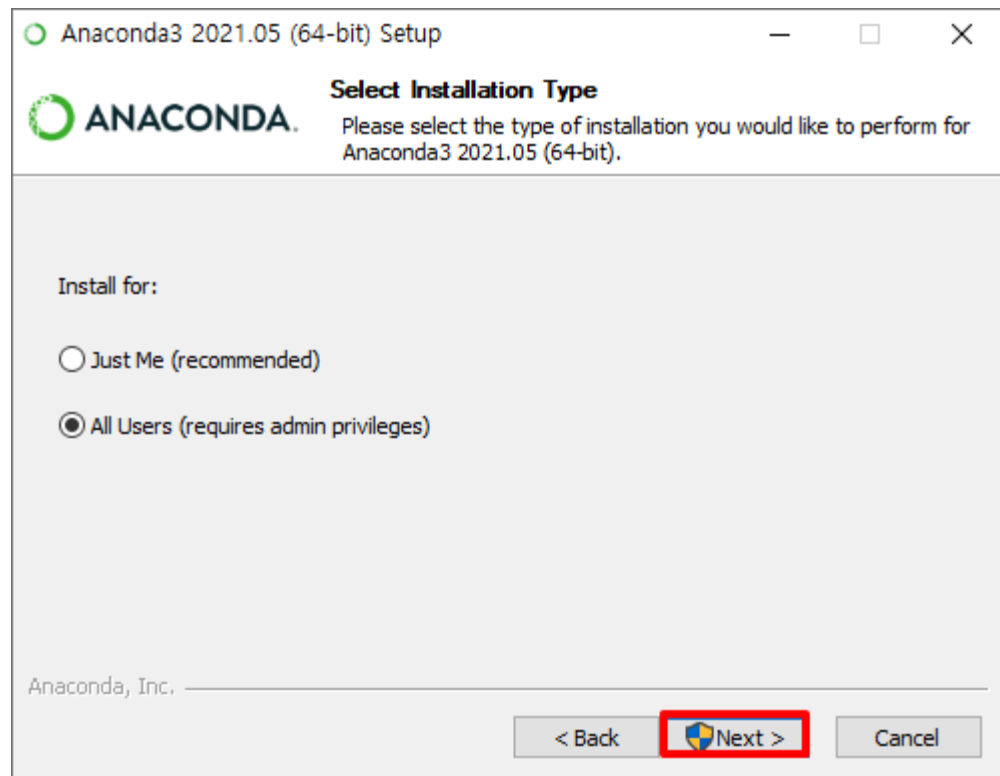


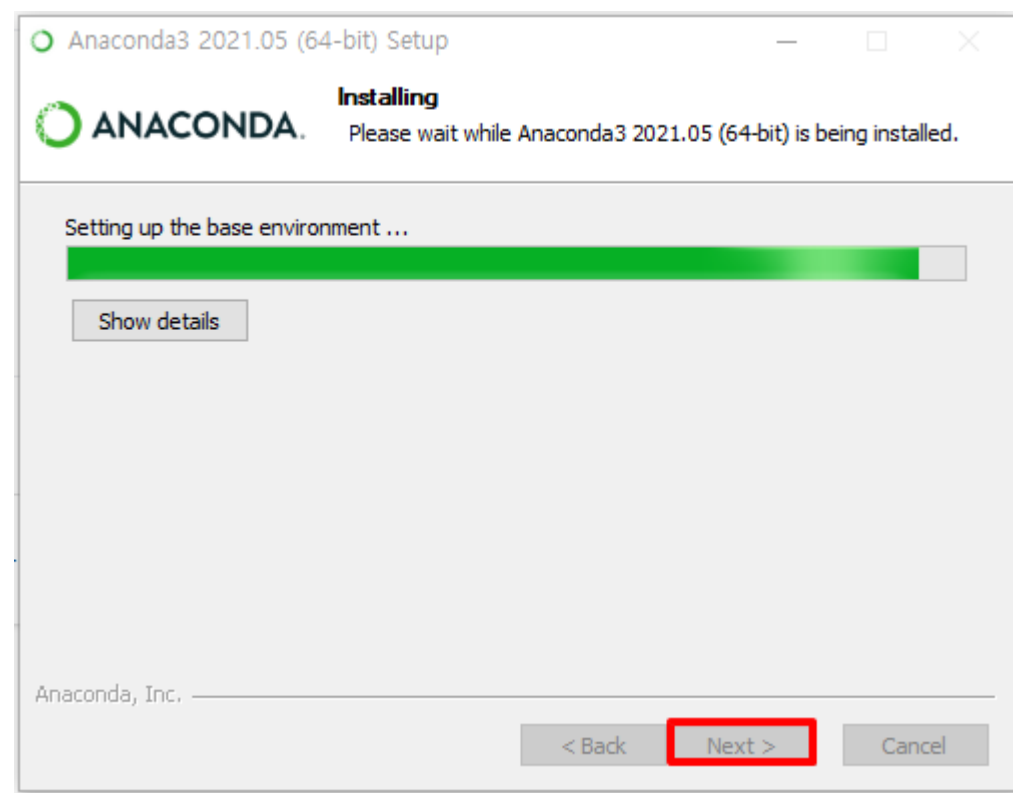
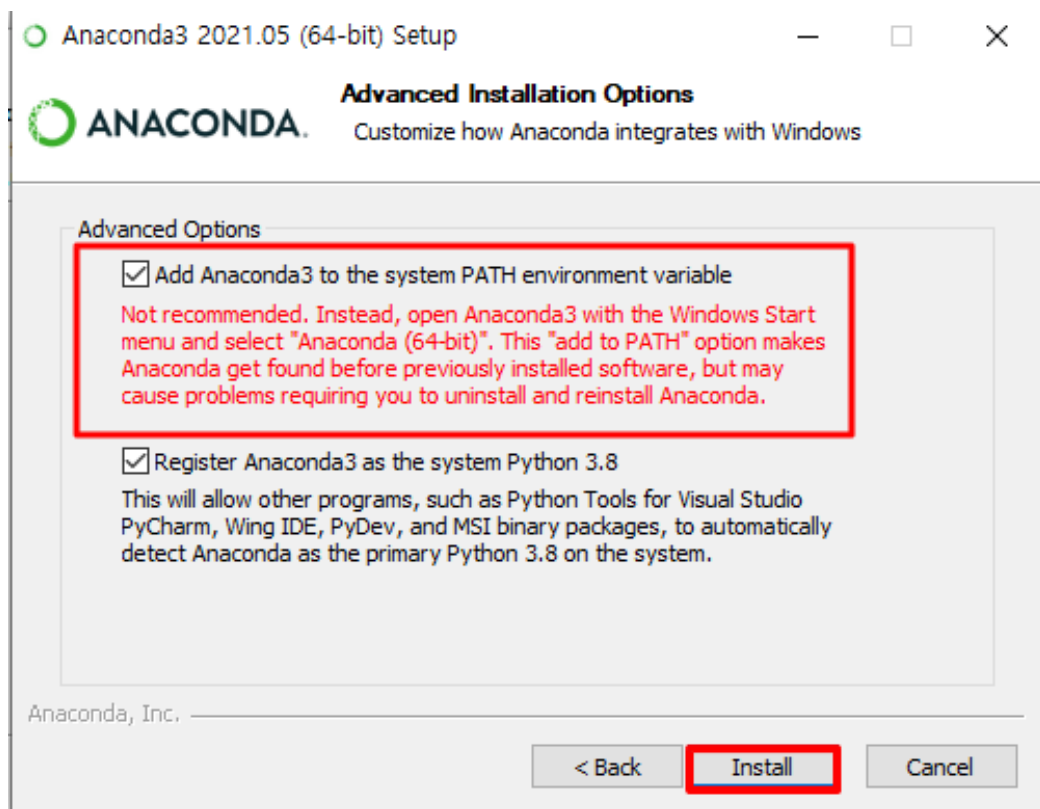
- 1) 아나콘다 홈페이지
- 2) 최신 버전 다운로드

환경에 맞는 버전 다운

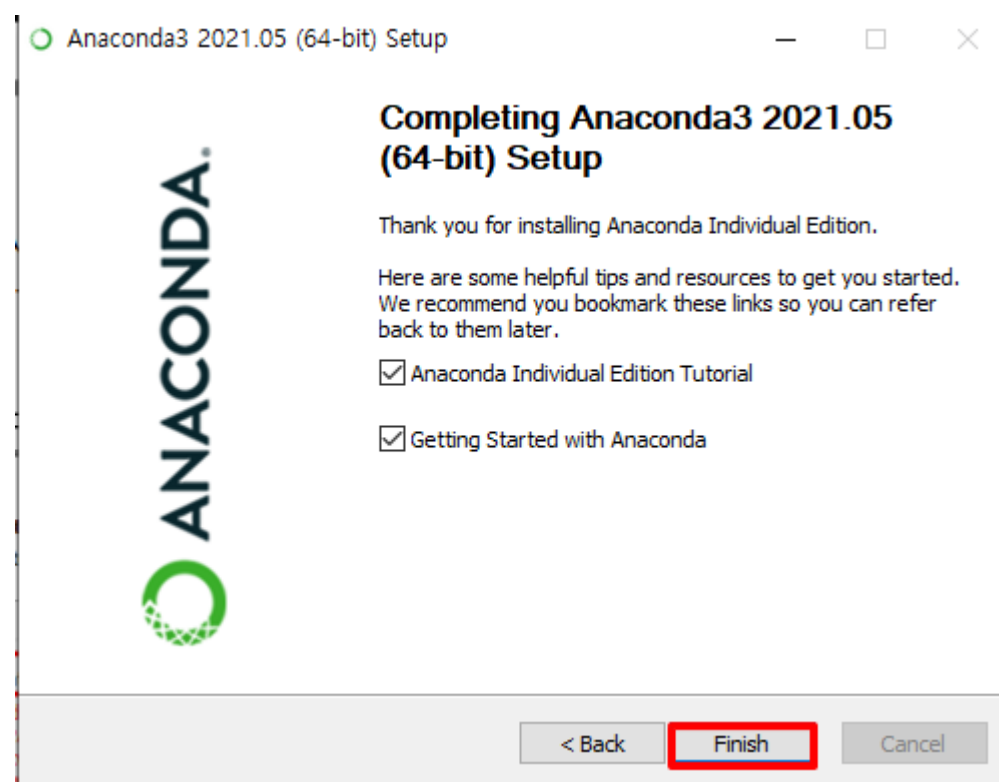
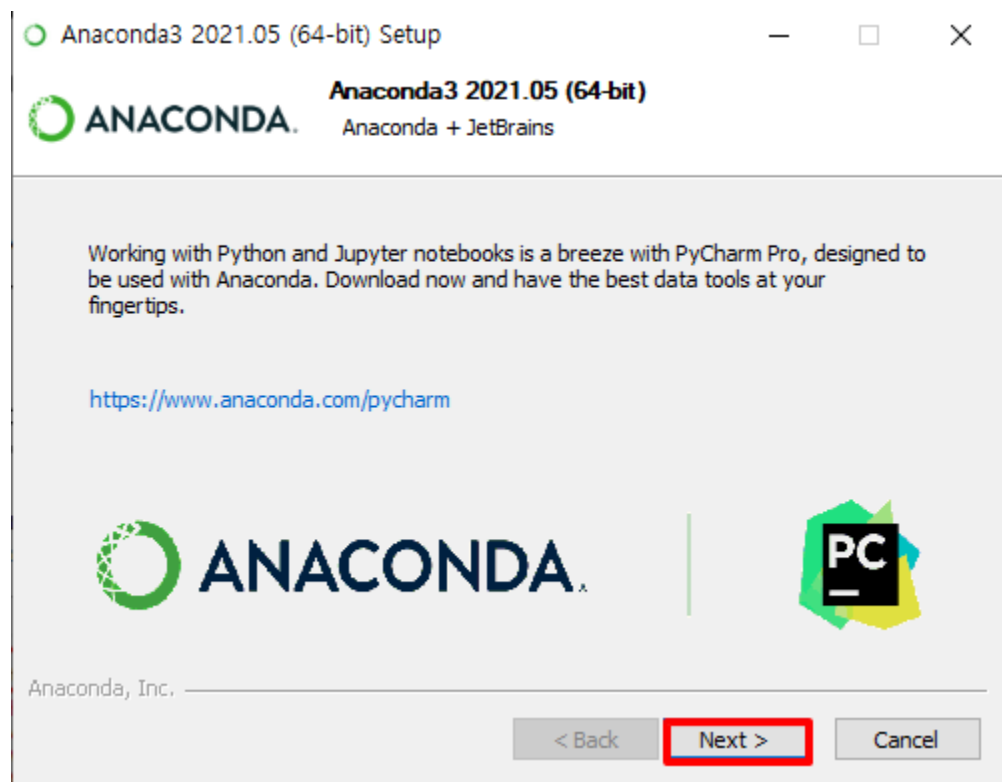


1) 동의하고 설치 진행





2) 체크박스 선택 후 설치 진행



2. Jupyter notebook 실행

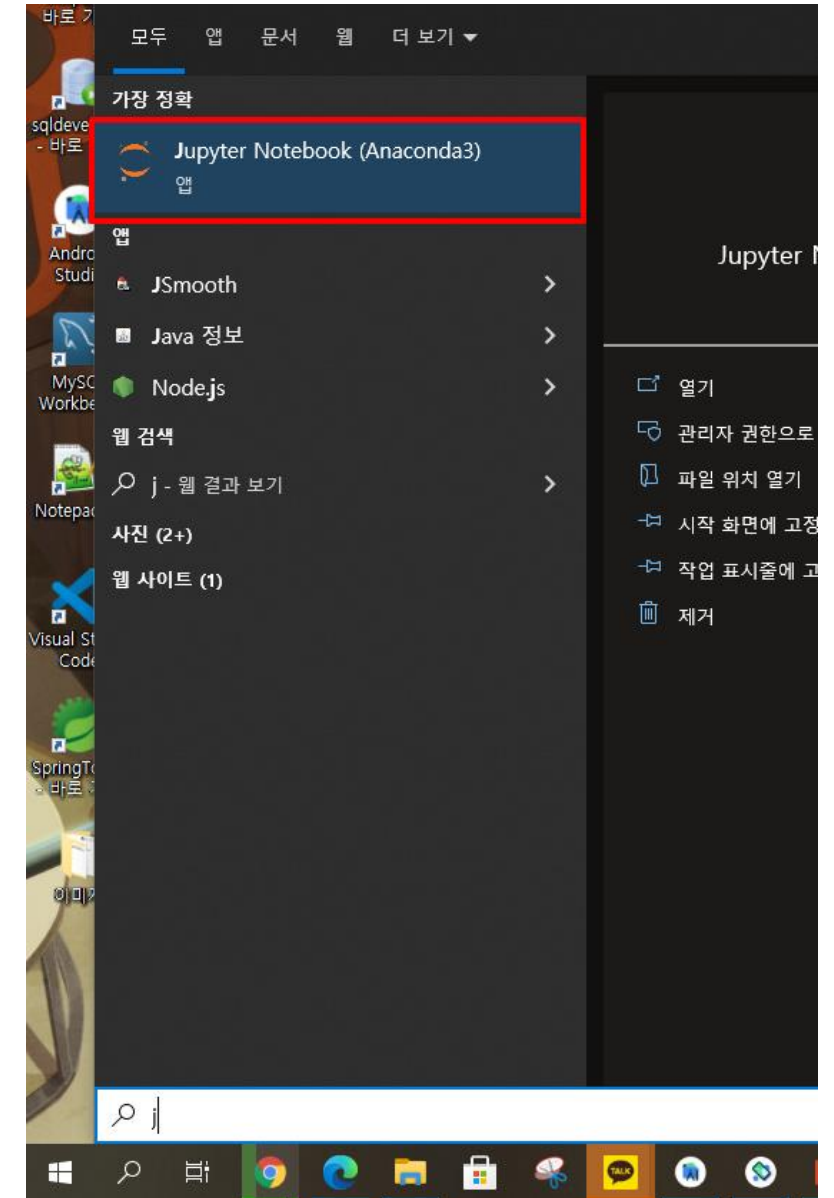
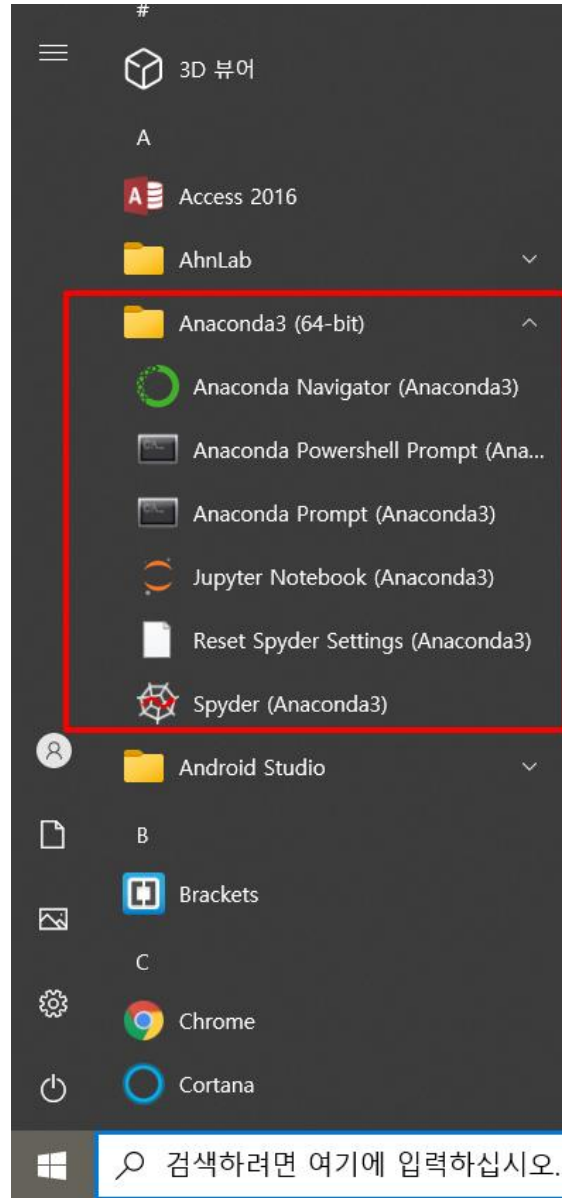
· 바로가기

→ Anaconda3

→ Jupyter Notebook

OR

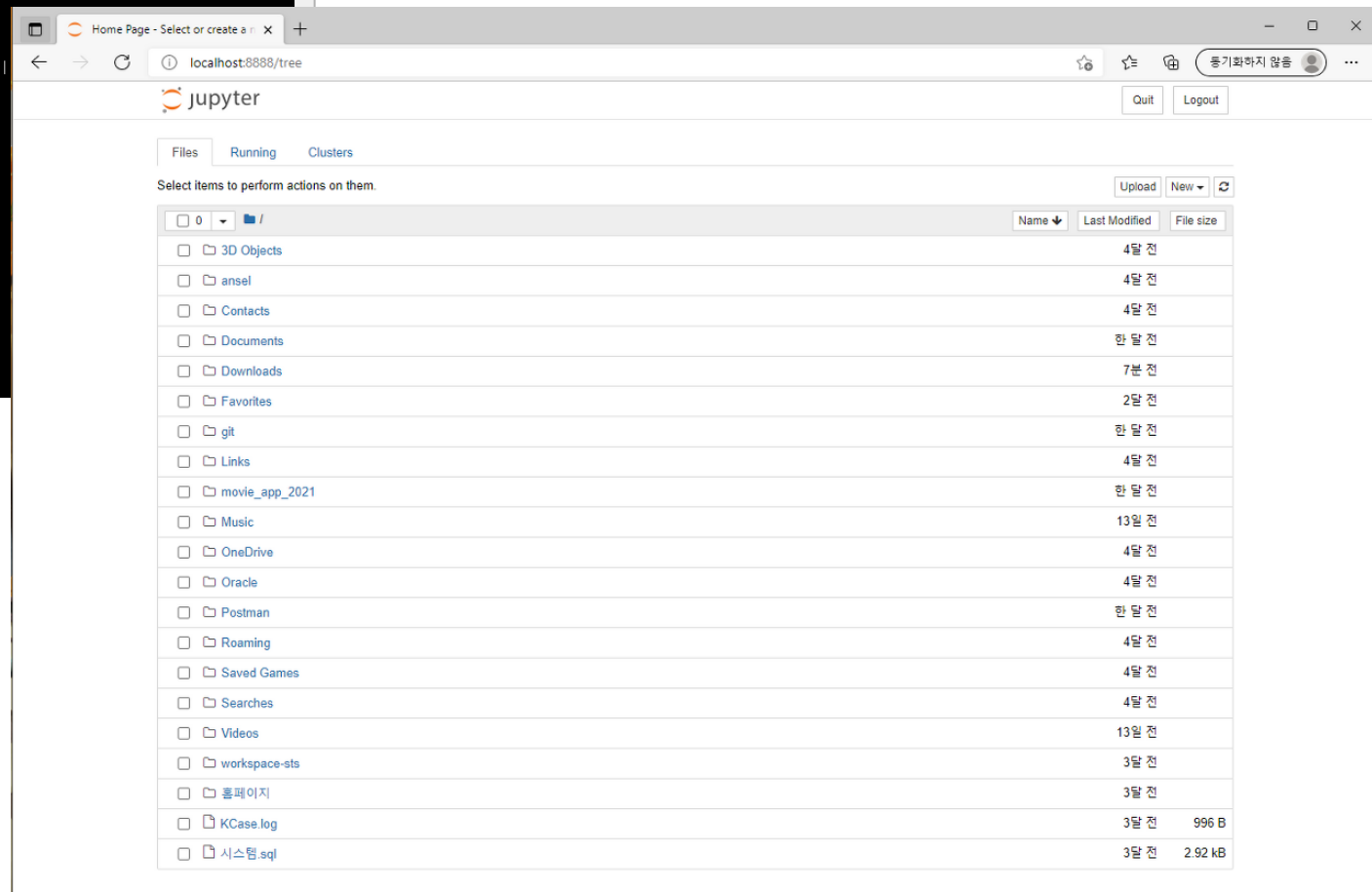
· Jupyter Notebook
검색 후 실행



```
Jupyter Notebook (Anaconda3)
[W 2021-12-04 23:21:04.241 LabApp] 'notebook_dir' has moved from NotebookApp to ServerApp. This config will be passed
to ServerApp. Be sure to update your config before our next release.
[W 2021-12-04 23:21:04.241 LabApp] 'notebook_dir' has moved from NotebookApp to ServerApp. This config will be passed
to ServerApp. Be sure to update your config before our next release.
[I 2021-12-04 23:21:04.253 LabApp] JupyterLab extension loaded from C:\ProgramData\Anaconda3\lib\site-packages\jupyter
lab
[I 2021-12-04 23:21:04.254 LabApp] JupyterLab application directory is C:\ProgramData\Anaconda3\share\jupyter\lab
[I 23:21:04.259 NotebookApp] Serving notebooks from local directory: D:\sumin\python_work
[I 23:21:04.260 NotebookApp] Jupyter Notebook 6.3.0 is running at:
[I 23:21:04.260 NotebookApp] http://localhost:8888/?token=a46729272252b57de20035b2505c2731a61fedfd3b43bdfb
[I 23:21:04.260 NotebookApp] or http://127.0.0.1:8888/?token=a46729272252b57de20035b2505c2731a61fedfd3b43bdfb
[I 23:21:04.261 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).

[C 23:21:04.364 NotebookApp]

To access the notebook, open this file in a browser:
    file:///C:/Users/sumin/AppData/Roaming/jupyter/runtime/nbserver-13396-open.html
Or copy and paste one of these URLs:
    http://localhost:8888/
    or http://127.0.0.1:8888/
```



Jupyter 에서 파일이
저장된 경로로 접속

jupyter

작업 중인 파일 목록

기존 파일 / 폴더 추가

Quit Logout

Files Running Clusters

Select items to perform actions on them.

0 / Desktop / 인공지능_실습 / ex1

Python 3

인공지능_실습_1차시.ipynb

implementation.py

Upload New

Notebook: Python 3

Other: Text File Folder Terminal

새로운 파이썬 파일 생성

등록되어있는 파일 클릭하여 실행

파일 등록, 생성, 실행

파일 불러오기 / 저장 등

새로운 셀 추가

선택한 셀 실행

초기화 후 전체 실행

동작 중인 커널의 종류

선택한 cell의 type

Code : code를 작성

Markdown : 메모, 설명 등을 작성

jupyter Untitled Last Checkpoint: 1분 전 (unsaved changes)



Logout

File Edit View Insert Cell Kernel Widgets Help

Trusted

Python 3

File Edit View Insert Cell Kernel Widgets Help Run Stop Restart Clear All Run All

In [5]: `print('Hello World!')`

Jupyter는 cell 단위 인코딩을 수행

Hello World!

In [6]: `x = 1 + 1`
`print(x)`

2

In [7]: `print(x)`

다른 cell에서 저장된 변수도 이용 가능

2

In []:

1. Grid 그려보기

이제 implementation에서 제공되는 메소드들을 사용하여 grid들을 그려보도록 하겠습니다.

grid1은 SquareGrid라는 메서드를 사용하여 그려볼겁니다.

```
In [2]: #implementation 모듈에서 제공되는 SquareGrid라는 메서드를 사용하여 grid1을 그려봅시다
#grid1의 크기는 30x15로 설정해줍니다
grid1 = SquareGrid(30, 15)
#grid1의 윤곽이 잡혔으면 임의로 구성된 장애물(wall)을 만듭니다.
grid1.walls = [from_id_width(id, width=30) for id in [21,22,51,52,81,82,93,94,111,112,123,124,133,134,141,142,153,154,163,164,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265,266,267,268,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,322,323,324,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380,381,382,383,384,385,386,387,388,389,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,500,501,502,503,504,505,506,507,508,509,510,511,512,513,514,515,516,517,518,519,520,521,522,523,524,525,526,527,528,529,530,531,532,533,534,535,536,537,538,539,540,541,542,543,544,545,546,547,548,549,550,551,552,553,554,555,556,557,558,559,560,561,562,563,564,565,566,567,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586,587,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696,697,698,699,700,701,702,703,704,705,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,777,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,893,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,916,917,918,919,920,921,922,923,924,925,926,927,928,929,930,931,932,933,934,935,936,937,938,939,940,941,942,943,944,945,946,947,948,949,950,951,952,953,954,955,956,957,958,959,960,961,962,963,964,965,966,967,968,969,970,971,972,973,974,975,976,977,978,979,980,981,982,983,984,985,986,987,988,989,990,991,992,993,994,995,996,997,998,999,1000,1001,1002,1003,1004,1005,1006,1007,1008,1009,1010,1011,1012,1013,1014,1015,1016,1017,1018,1019,1020,1021,1022,1023,1024,1025,1026,1027,1028,1029,1030,1031,1032,1033,1034,1035,1036,1037,1038,1039,1040,1041,1042,1043,1044,1045,1046,1047,1048,1049,1050,1051,1052,1053,1054,1055,1056,1057,1058,1059,1060,1061,1062,1063,1064,1065,1066,1067,1068,1069,1070,1071,1072,1073,1074,1075,1076,1077,1078,1079,1080,1081,1082,1083,1084,1085,1086,1087,1088,1089,1090,1091,1092,1093,1094,1095,1096,1097,1098,1099,1100,1101,1102,1103,1104,1105,1106,1107,1108,1109,1110,1111,1112,1113,1114,1115,1116,1117,1118,1119,1120,1121,1122,1123,1124,1125,1126,1127,1128,1129,1130,1131,1132,1133,1134,1135,1136,1137,1138,1139,1140,1141,1142,1143,1144,1145,1146,1147,1148,1149,1150,1151,1152,1153,1154,1155,1156,1157,1158,1159,1160,1161,1162,1163,1164,1165,1166,1167,1168,1169,1170,1171,1172,1173,1174,1175,1176,1177,1178,1179,1180,1181,1182,1183,1184,1185,1186,1187,1188,1189,1190,1191,1192,1193,1194,1195,1196,1197,1198,1199,1200,1201,1202,1203,1204,1205,1206,1207,1208,1209,1210,1211,1212,1213,1214,1215,1216,1217,1218,1219,1220,1221,1222,1223,1224,1225,1226,1227,1228,1229,1230,1231,1232,1233,1234,1235,1236,1237,1238,1239,1240,1241,1242,1243,1244,1245,1246,1247,1248,1249,1250,1251,1252,1253,1254,1255,1256,1257,1258,1259,1260,1261,1262,1263,1264,1265,1266,1267,1268,1269,1270,1271,1272,1273,1274,1275,1276,1277,1278,1279,1280,1281,1282,1283,1284,1285,1286,1287,1288,1289,1290,1291,1292,1293,1294,1295,1296,1297,1298,1299,1300,1301,1302,1303,1304,1305,1306,1307,1308,1309,1310,1311,1312,1313,1314,1315,1316,1317,1318,1319,1320,1321,1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