CSE 1321L - Python

Introduction to Python and PyCharm

Lab 1

-
- !
- "   #
- $ %   !   & ' (! & ' ! !   )
            !   !
- !%   %   *
-                  %   + !   ,   *   -   ! .   %
   ! !   !

/   %   !   -   #   !   !   +   , .

```
0      1     2    34 5
0 2       1
0 )     1
0        !     1
0 6      1
0 5  %1
```

Note: putting *anything* after the # symbol makes it a "comment" – which is ignored by the computer
For all your future labs and assignments, you are re uired to put the header so we know who submitted the file!
"hank you ahead of time#

7   -   - %   !   #
                                    8 !   #   9   ! !   :   -
%!   !   !   !   -   &
         !   :   - ;   %   !
                                7   +   ,   %   #
  ! .   %   !   %   <   !   7
                            !   - %!   !   -   %!
8 !   9 #   1
        188   #   & # &   =   =

$eali%e that, technically, an & ' (is not needed!)ou could work directly with the interpreter from the command line if you wanted to! "his is something you should e *plore later on, because some companies, like +pple, ask these things in ,ob inter-iews!
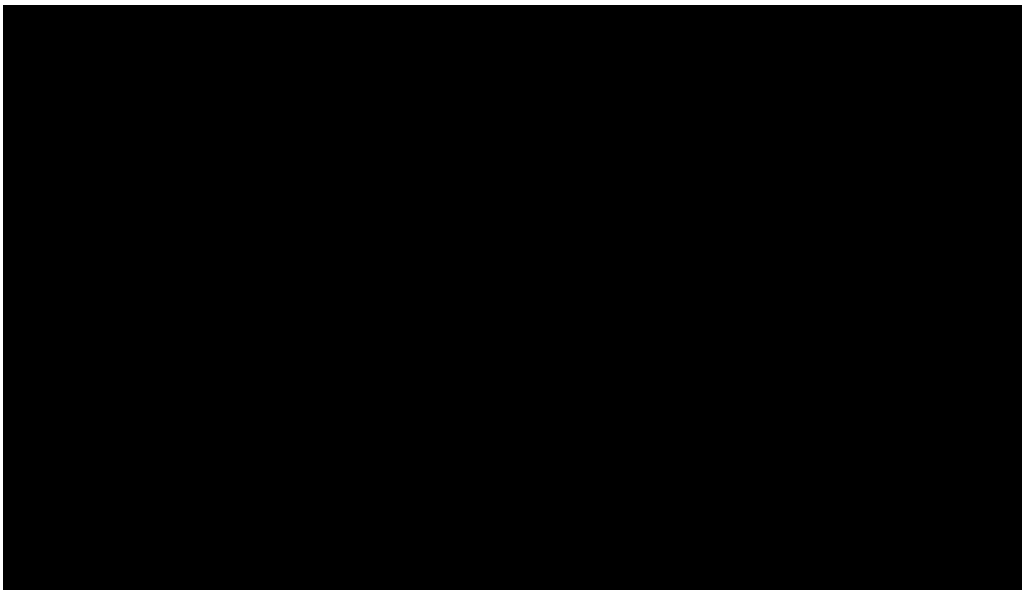
                        -                  9   ℓ æ

Installing PyCharm on your home laptop/workstation (if you haven't done so)
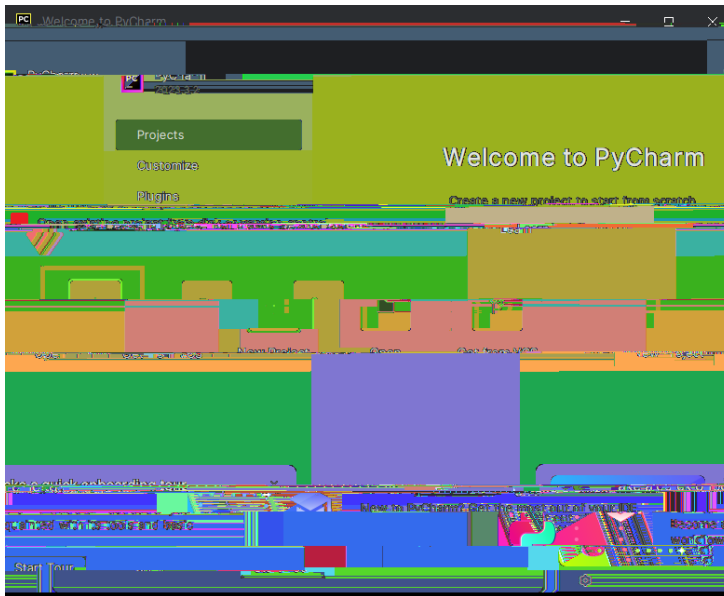
1. Please visit this link h! "s ##$$$.%etbrains.com#"ycharm#do$nload#
   a. Please make sure you select the correct "la&orm o' your com"uter
   b. Please make sure you do$nload the community edit on

2. ()er the do$nload is com"lete
   a. I' you have a * (C you $ill need to o"en the .dm+ , le $hich $as do$nloaded and dra+ the a""licat on to the a""licat ons 'older
   b. I' you have a – I. /O– S PC you $ill need to run the do$nloaded setu" e1ecutable and install Intelli2 on your com"uter
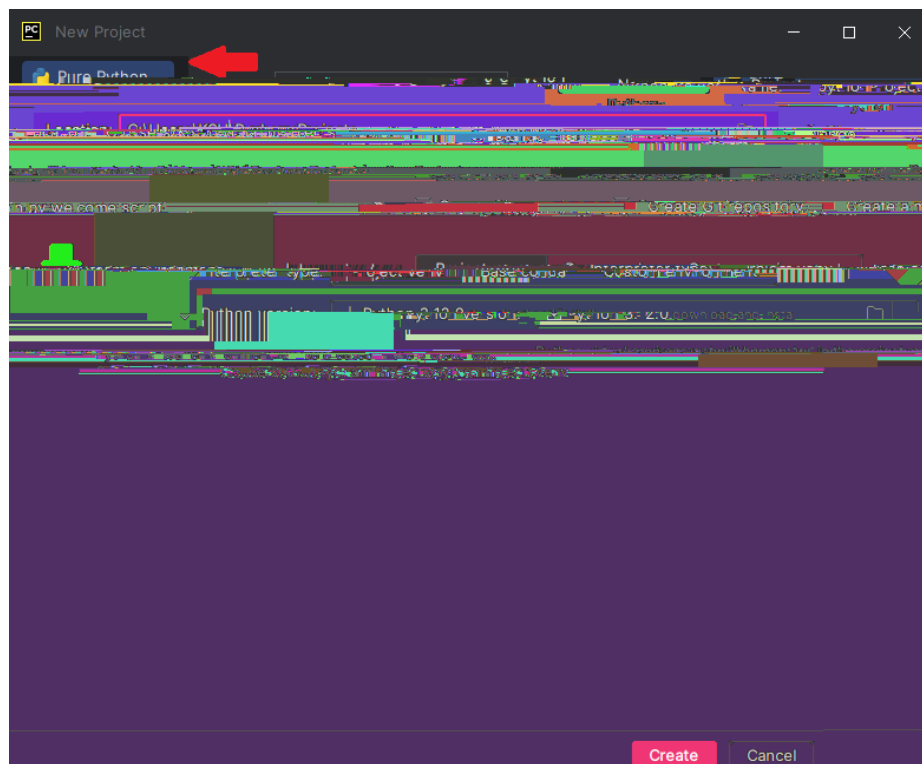
Creating new projects and configuring PyCharm the first time

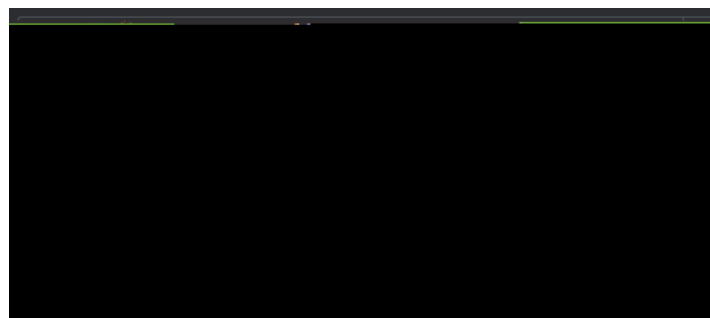1. Run PyCharm for the first time and go through the set-up screen, skip all the tips that it presents to you

2. Once you get to the main screen, please click New Project

3. Please then select (Python) and select the dropdown menu. Then, click (Download Python) as shown in the two figures below
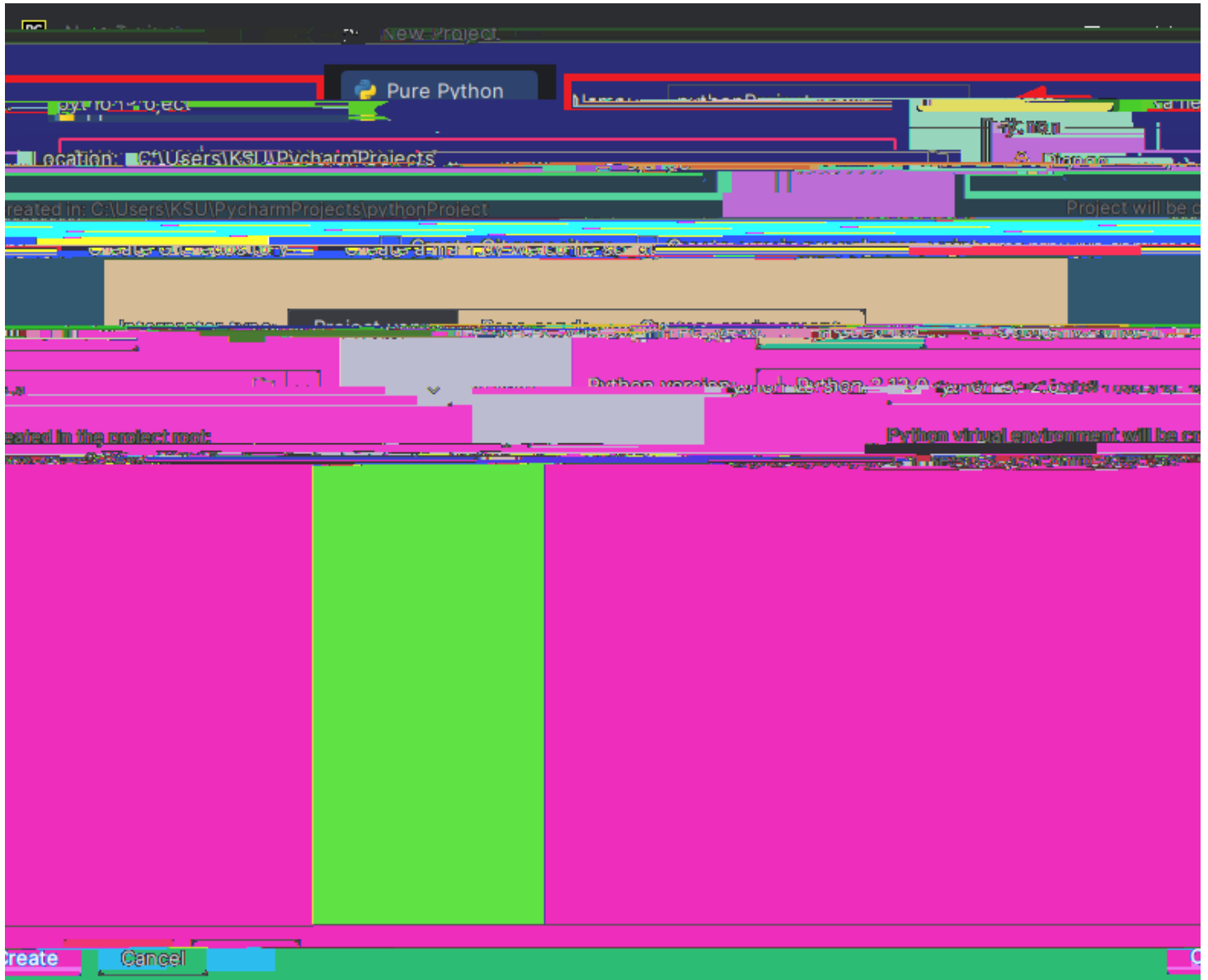

Please click the dropdown and then click download Python

9. Please select the choice as sho$n in the screenshot5 the version number may have chan+ed since the makin+ o' this document. Please note that you $ill only have to do this once5 a) er$ards this Python version $ill automa t cally be selected $henever you make a ne$ Python "ro%ect usin+ PyCharm

: . () er this5 you $ill arrive at the screen $here you $ill be instructed to
+ive your "ro%ect both a name and a loca t on. 8he name "rovided should match the Lab or
(ssi+nment that you are solvin+ ;you should create a ne$ "ro%ect every t me you start a ne$ Lab or
(ssi+nment<. Each , le you create ;e1"lained belo$< should re"resent each e1ercise solu t on. 8hen
click =inish.

Creating Scripts

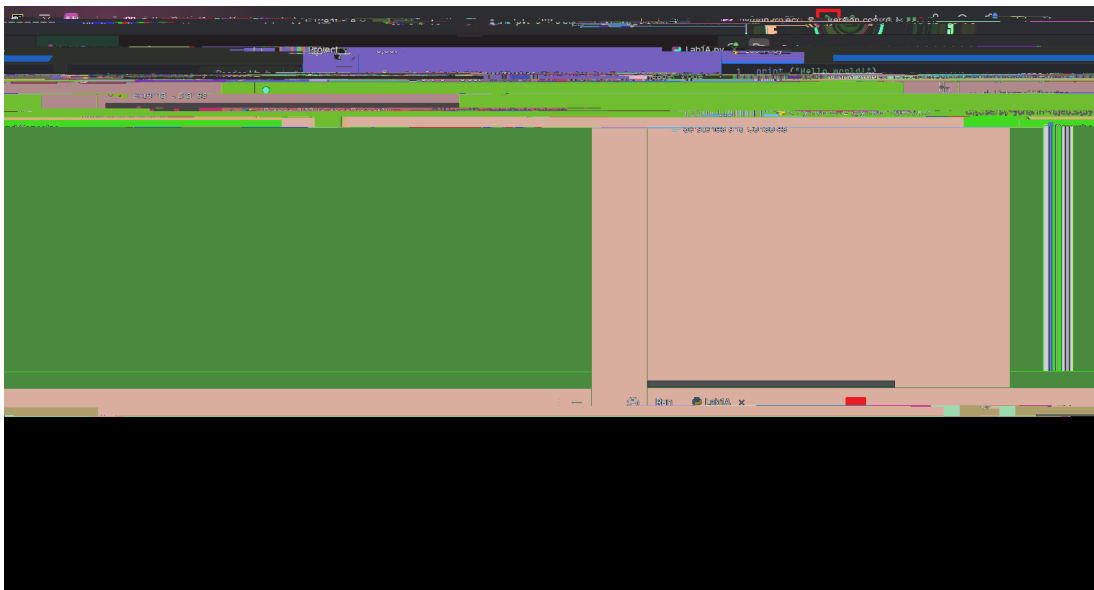s mentioned a!ove" for every e#ercise solution" it has to have its own script unless otherwise instructed$

1. 8o create a class5 ri+ht-click the 6Scri"ts7 'older ;as sho$n in the screenshot< and click . e$5 then Python =ile.
2. Please +ive the scri"t an a""ro"riate name and "ress enter on your keyboard. >iola? @ou have created a ne$ scri"t. Please +ive the scri"ts a""ro"riate names as "rovided to you in either the assi+nment or the lab e1ercises ;see belo$<. . amin+ your classes incorrectly may ;and likely $ill< result in the auto+rader assi+nin+ a Aero 'or that "art o' the lab.

%unning a Script

Please click the +reen 6"lay bu! on7 ;as sho$ in the screenshot belo$< and click 6run7

c

=or this lab᷈ you᷈re +oin+ to $ork $ith your I/E to code and run some "ro+rams $e have "rovided you. Cy the end o' this lab᷈ you $ill have three , les that you need to submit to the auto+rader <u>at the same t me</u> D Lab1(᷈ Lab1C and Lab1C. @ou should be able to create one "ro%ect $ith three Python , les ;one 'or each Lab "art belo$<.

Ce'ore you be+in the ne1t "art o' this lab᷈ you mi+ht start 'eelin+ over$helmed $hen you , rst look at the source code belo$. 8here᷈s some stran+e symbols there? @ou᷈ll +et com'ortable $ith these as you +o.

8hree "ro+rams have three "roblems $ith them

- One o' the "ro+rams belo$ has a lo+ic error in it D meanin+ that᷈ $hile it runs᷈ it doesn᷈t "roduce the correct out"ut. @ou must , nd the error and , 1 it.

- One o' the "ro+rams belo$ is $ri! en incorrectl᷈ so you can᷈t even run it? Cased on $hat $e %ust told you᷈ you must , +ure out $hy᷈ , 1 the error᷈ save the , le᷈ and re-run the code.

- One o' the "ro+rams runs , ne D but has a ty"o in the out"ut. I' you $ere to submit this , le᷈ the auto+rader $on᷈t like it ;because the out"ut does not match<. @ou may try submiЕn+ the lab be'ore , 1in+ the error so you can see $hat the auto+rader does.

– hen crea t n+ the , les 'or the "ro+rams belo$᷈ they must be called Lab1(᷈ Lab1C᷈ and Lab1C ;and have

```
================================= Program Lab1).py ====================================
# Program Lab1).py
# Demonstrate reading a string from the user.
# *eads a character string from the user and prints it.

message = input ( +nter a line of te,t-  #.
print ( /ou rote 0  1 message 1  0 #.
```

```
================================= Program Lab12.py ================================
# Program Lab12.py
# Demonstrate the use of the input function to read numeric data.
# 2alculates fuel efficiency based on (alues entered by the user.

miles = input ( +nter the number of miles-  #
gallons = input ( +nter the gallons of fuel used-  #

mpg = int (miles# 3 float (gallons#
print ( 4iles Per 5allon-   1 str (mpg##
```