Coding Tips and How-tos

# CMD Commands

* Add 'C:\Users\tomos\AppData\Roaming\Python\Python39\Scripts' to directory PATH
* Start virtual environment type in CMD C:\Users\tomos\source\repos\Platform\_v1\_0\Platform\_v1\_0\env\Scripts\activate.bat'
* Then to install Django import export in CMD type 'py -m pip install django-import-export'
* To start Python shell in CMD first navigate to where the manage.py is located then type 'py manage.py shell'
* To access model data type within the Python shell 'from app.models import Bids', where Bids is just an example of a model name
* The data can then be queried / manipulated using the Django ORM
* Country.objects.filter(name\_\_exact="Peru").values('name')
* City.objects.filter(id=1).values('country')
* City.objects.filter(id=1).values('') to show all field values
* City.objects.filter(id=1).values('country\_id') also works as country\_id is the ForeignKey added by Django
* Filters for a specific database entry: Bids.objects.filter(id=4940).values()
* Save a new value to the database: Bids(bid\_value=2005).save()
* Item.objects.values('menu\_\_name\_menu') or Item.objects.values('menu\_\_name\_menu').values()
* ForeignKey has to be a number and cannot be text
* bids=Bids.objects.values()[0:10]
* sortedbids=list(bids.values\_list('bid\_value', flat=True))
* sortedbids.sort()

# Django Databases

* **Creating** - once a new database model is defined in model.py, this can be loaded by first clicking on ‘Django Make Migrations’ then ‘Django Migrate’
  + The variable names in an Excel file should match exactly those as they are defined in the code
* **Uploading** – to upload data from the website to a database i.e. not using the Admin page, then forms.py needs to be amended, however, if data is only downloaded then forms.py is not needed

# Python

* Python on my machine I think exists in a virtual environment, meaning it must be started via PowerShell in Microsoft Visual Studio
* Matplotlib initial steps have been followed using the below <https://www.w3schools.com/python/matplotlib_getting_started.asp>
* Pip is already installed
* Matplotlib must be imported each time Python is started
* Numpy is the fundamental package for scientific computing with Python and should be used to create and handle matrices and arrays