**Data Management – Final Project**

**Q1 (A)**

**SELECT Club.club\_name, AVG(Player.defending) as average\_defending\_rating**

**FROM Player**

**JOIN Club ON Player.club\_team\_id = Club.cid**

**JOIN Defending ON Player.pid = Defending.did**

**GROUP BY Club.club\_name**

**ORDER BY average\_defending\_rating DESC**

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自動產生的描述**

**Q1 (B)**

**SELECT Player.short\_name, Club.club\_name, calculated.attacking\_rating**

**FROM Player**

**JOIN Club ON Player.club\_team\_id = Club.cid**

**JOIN (**

**SELECT aid, (crossing + finishing + heading\_accuracy + short\_passing + volleys) / 5 AS attacking\_rating**

**FROM Attacking**

**) AS calculated ON Player.pid = calculated.aid**

**WHERE calculated.attacking\_rating > 80**

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自動產生的描述**

**Q1 (C)**

**SELECT Club.cid, Club.club\_name**

**FROM Club**

**JOIN Player ON Club.cid = Player.club\_team\_id**

**GROUP BY Club.cid, Club.club\_name**

**HAVING AVG(Player.shooting) >= (**

**SELECT AVG(Player.shooting)**

**FROM Player**

**JOIN Club ON Player.club\_team\_id = Club.cid**

**WHERE Club.club\_name = 'AC Milan'**

**)**

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自動產生的描述**

**Q2 (A)**

**SELECT Winery.country, COUNT(DISTINCT Grape.variety) AS number\_of\_grape\_varieties**

**FROM Grape**

**JOIN Wine ON Grape.id = Wine.gid**

**JOIN Winery ON Wine.wid = Winery.id**

**GROUP BY Winery.country**

**ORDER BY number\_of\_grape\_varieties DESC**

**LIMIT 1**

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自動產生的描述**

**Q2 (B)**

**SELECT AVG(Wine.price) AS average\_price, AVG(Wine.points) AS average\_points**

**FROM Wine**

**WHERE Wine.price >= 340**

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自動產生的描述**

**Q2 (C):**

**SELECT Wine.points, Rater.name**

**FROM Wine**

**JOIN Rater ON Wine.rid = Rater.id**

**(Rest of code can be found in DataManagement\_Final.py or DataManagement\_Final.ipynb files)**