Student Sheet

Student Number: 12345   **F-code:** ENG

Student Name: Esraa Elgendy   **Faculty:** Engineering

Address(city, country): Cairo, Egypt   **Major:** Computer

Tel No/Mobile: 123456789 / +2010123856

Interview Name	Interview Description	Admission Grade	Comment
Data Science – ML	Deep Learning-Neural Network	90	Very Good
Data Engineering – ETL	ETL- Data Pipeline-Python	95	Excellent
Data Analytics - Python	Power BI-Tableau	98	Excellent

0NF

(Stud_No, Stud_Name, Address(city, country),   Composite Attribute

Tel_No, F-code, Faculty, Major,   Multivalued Attribute

Int_Name, Int_Desc, Ad_Grade, Comment)   Repeating Group

1NF

1NF → ✘ Multivalued Attribute→ Place it in a **New Table** carrying the **PK as FK**

  ✘ Repeating Group (Multivalued Attribute + Related)→Place it in a **New Table** carrying the PK as FK

  ✘ Composite Attribute (PK+FK) →subparts each in a column within the same table

Student (Stud_No, Stud_Name, F-code, Faculty, Major, city, country)

Student_Tel (Stud_No, Tel_No)

Interview_Student (stud_No, Int_Name, Int_Desc, Ad_Grade, Comment)   Partial Dependency

2NF

2NF→ ✔ 1 NF

  ✘ Partial Dependency (Composite attribute (PK+FK)) →Non key attribute carrying the part of key
          they depend on & place them in a New Table

Student (Stud_No, Stud_Name, F-code, Faculty, Major, city, country)   Transitive Dependency

Student_Tel (Stud_No, Tel_No)

Interview_Student (stud_No, Int_Name, Int_Desc, Ad_Grade, Comment)

Interview (Int_Name, Int_Desc)

3NF

3NF→ ✔ 2 NF

  ✘ Transitive Dependency →**Non key** attribute carrying the **Non key** they depend on
          & place them in a **New Table**

Student (Stud_No, Stud_Name, F-code, Major, city, country)

Faculty (F-code, Faculty)

Student_Tel (Stud_No, Tel_No)

Interview_Student (stud_No, Int_Name, Int_Desc, Ad_Grade, Comment)

Interview (Int_Name, Int_Desc)

Functional Dependency: relationship between attributes of any table that are dependent on each other.

Fully: Non-key attribute fully dependent on key attribute

Partial: Non-key attribute partially dependent on key attribute (dependent on part of key attribute)

Transitive: Non-key attribute dependent on Non-key attribute dependent on key attribute