

## 1NF:

### STUDENT

<u>student_id</u>	student_name	credits	advisor_id	advisor_name	<u>course_code</u>	course_desc	grade
12345	Jane Smith	12	654	Shirley	CIS 101	Logic	A
12345	Jane Smith	12	654	Shirley	CIS 102	XHTML	B
12345	Jane Smith	12	654	Shirley	CIS 110	Visual Basic	A
98765	Thomas Last	9	745	Terry Evans	BUS 101	Business I	B
98765	Thomas Last	9	745	Terry Evans	ENG 101	English I	C
98765	Thomas Last	9	745	Terry Evans	ENG 102	English II	C
56789	Robert Sim	12	654	Shirley	ACC 101	Accounting I	B
56789	Robert Sim	12	654	Shirley	ACC 102	Accounting II	A
56789	Robert Sim	12	654	Shirley	ENG 101	English I	A
56789	Robert Sim	12	654	Shirley	ENG 102	English II	A

STUDENT (student\_id, student\_name, credits, advisor\_id, advisor\_name, course\_code, course\_desc, grade)

## 2NF:

### STUDENT

<u>student_id</u>	student_name	credits	advisor_id	advisor_name
12345	Jane Smith	12	654	Shirley
98765	Thomas Last	9	745	Terry Evans
56789	Robert Sim	12	654	Shirley

### COURSE

<u>course_code</u>	course_desc
CIS 101	Logic
CIS 102	XHTML
CIS 110	Visual Basic
BUS 101	Business I
ENG 101	English I
ENG 102	English II
ACC 101	Accounting I
ACC 102	Accounting II

## STUDENT\_COURSE

<u>student_id</u>	<u>course_code</u>	grade
12345	CIS 101	A
12345	CIS 102	B
12345	CIS 110	A
98765	BUS 101	B
98765	ENG 101	C
98765	ENG 102	C
56789	ACC 101	B
56789	ACC 102	A
56789	ENG101	A
56789	ENG102	A

**STUDENT** (student\_id, student\_name, credits, advisor\_id, advisor\_name)

**COURSE** (course\_code, course\_desc)

**STUDENT\_COURSE** (student\_id, course\_code, grade)

FK student\_id -> STUDENT

FK course\_code -> COURSE

## 3NF:

### STUDENT

<u>student_id</u>	student_name	credits	advisor_id
12345	Jane Smith	12	654
98765	Thomas Last	9	745
56789	Robert Sim	12	654

### ADVISOR

<u>advisor_id</u>	advisor_name
654	Shirley
745	Terry Evans

## COURSE

<u>course_code</u>	course_desc
CIS 101	Logic
CIS 102	XHTML
CIS 110	Visual Basic
BUS 101	Business I
ENG 101	English I
ENG 102	English II
ACC 101	Accounting I
ACC 102	Accounting II

## STUDENT\_COURSE

<u>student_id</u>	<u>course_code</u>	grade
12345	CIS 101	A
12345	CIS 102	B
12345	CIS 110	A
98765	BUS 101	B
98765	ENG 101	C
98765	ENG 102	C
56789	ACC 101	B
56789	ACC 102	A
56789	ENG101	A
56789	ENG102	A

**STUDENT** (student\_id, student\_name, credits, advisor\_id)

FK advisor\_id -> ADVISOR

**ADVISOR** (advisor\_id, advisor\_name)

**COURSE** (course\_code, course\_desc)

**STUDENT\_COURSE** (student\_id, course\_code, grade)

FK student\_id -> STUDENT

FK course\_code -> COURSE



