



Department of ICT/ Data Base Administrator/

Level II COC

Project 1 operate a data base application

Instruction: under this project you are expected to operate Database Application by performing the following tasks based on the information provided

Task 1: create a database

Instruction under this task you are expected to create a database called **School**.

Task 2: create table

Instruction under this task you are expected create the following tables

Student

Filed	Data type
Number Of student	Auto number
Student ID	Text
Student Name	Text
Student Age	Number
Student Sex	Text
Student City	Text
Student Country	Text
Student Entering Date	Date/Time

Course

Filed	Data type
Course ID	Text
Course dep code	Text
Course name	Text
Course Credit	Number
Course Books	Attachment
Stud ID	Text
Mark	Number

Teacher

Filed	Data type
Teacher ID	Text
Teacher Name	Text
Teacher Age	Number
Teacher Sex	Text
Teacher Phone number	Text
Teacher email	Hyperlink
Teacher Photo or other describer	OLE Object



Married Or Not	Yes/No
Which course given by she or he	Lookup wizard
Teacher Salary	Currency
Teacher Secrete code	Text
Department code	Text

Field Properties

❖ Student Table

✦ All caption make Stud_the filed name

- ✓ **Number Of student:-Text Align Center , Caption No of stud**
- ✓ **Student ID:-Field size 30**
 - **Impute mask:-** “Stude_ID-“00”/”000”,”>L””
- ✓ **Student Name:-Format:-write from Right to left**
 - **Impute mask:-** the first letter capital and other small
 - **Default values:** - Your name is?
 - **Required:-**Yes
- ✓ **Student Age:- Impute Mask:-Only Enter Number**
 - **Validation Rule :-**must inter greater than 18 other wise say “YOU ARE WRONG”
 - **Text Align Center**
- ✓ **Student Sex:-Filed size:- 1**
 - **Format:-** Make capital letter
 - **Input Mask:-**Make capital letter
 - **Validation Rule:-**Accept only M or F otherwise “Please Enter M or F”
 - **Default value:-M**
 - **Required:-**Make it yes Cannot pass Null/Blank
- ✓ **Student city:-Format:-separate by 2 4 2, Make Small letter, Write Right to left**
 - **Impute Mask:-**Must Enter Letter and digest
- ✓ **Student Country: - Format:-**Make the input!! at the last
 - **Input mask:-** First and last letter is Capital, Must have Letter
 - **Indexed:-** Yes(Duplicates OK)



- ✓ **Student Entering Date:-Format:-** Long Date
 - **Validation Rule:-**Must Enter not equal to 2019
 - **Show date picker:-**Never

❖ Course Table

✦ **All caption make Cour_the filed name**

∞ **Course ID: - Size 15**

- ✓ Use + or – and start by cou_ID- follow by 4digit and 3 Capital letter
- ✓ **Description:-** + is major course – is common course

∞ **Course dep code:-**

- ✓ Make it to accept 1 character 3capital letter and 2 numbers
- ✓ **Description:-** 1)@ For ICT 2)# for Business 3) % for Accounting Teachers

∞ **Course name:-**

- ✦ First letter capital other small
- ✦ By Default come ICT
- ✦ Not be Null/Blank

∞ **Course Credit: - General Number**

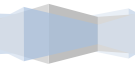
- ✦ Make it to accept only 1 number
- ✦ Only accept ≥ 1 otherwise display” You can Enter Only $>$ or $=$ to 1”
- ✦ Make text align Center

∞ **Course Books: - Not be Null/Blank**

✦ **Stud ID: - 30**

- ✓ Make ID start by ‘Stude_ID-‘ follow by two digit then ‘/’ and follow by three Digit then ‘,’ and one Capital Letter

∞ **Mark:-**Accept Duplicates values



❖ Teacher Table

★ All caption make Teach_the filed name

- **Teacher ID:-** Write Right to left and First capital letter other small letter
 - ✓ Make it to use 1 character follow by 1 capital letter and 4 small letter and 3 number.
 - ✓ Use character
 - ✓ **Description:-** 1)@ For ICT 2)# for Business 3)% for Accounting Teachers
- **Teacher Name:-** Make All In capital letter in format and also Input mask
 - ✓ Accept only letter
- **Teacher Age:-** Accept Between 26 and 50 other wise say “You can’t be teacher”
- **Teacher Sex:-** By default make it Male
 - ✓ Only accept letter and make the first letter capital other small
 - ✓ Accept only “Male” or “Female” Otherwise say Enter only Male or Female
- **Teacher phone number:-** Enter with Input mask
- **Teacher Email:-** separate the word to 4, 1...
 - ✓ Must Enter data
 - ✓ Can pass without Entering data
 - ✓ Can Duplicate data
- **Teacher photo or other describer:-** Make txt General ○ **Description:-** One file just to make Shure is it he or not Photo is Best
- **Married or not:-** Make the format Yes or no ○ By Default make it Yes
- **Which course given by he or she:-** Make two columns and 10 rows and Allow Multiple values 2nd Column write 1st semester and 2nd semester (get information from your instructor)
- **Teacher salary:-** salary must have >3000 and <20,000
- **Teacher secrete code:-** make the input mask password, and cannot pass without Entering secrete code but if we don’t know make it can pass without Entering data
 - ✓ **Description:-** This is Teachers Special ID



□ **Department code:-**

✓ Make it to accept 1 character 3 capital letter and 2 numbers

✓ **Description:-** 1) @ For ICT 2) # for Business 3) % for Accounting Teachers

Task 3: create Relationship

Instruction: - under this task you are expected to create the appropriate Relationships between the Tables. I.e. Student table Stude_ID to Course table Stude_ID Insert the following Data's

Student table data

Number of student	Student ID	Student Name	Student Age	Student Sex	Student City	Student Country	Student Entering date
1	Stude_ID-21/213,B	Betty	21	F	AA-YEKA-09	Ethiopia	1/2/2018
2	Stude_ID-03/897,M	Mahelet	19	F	DD-HAYE-15	Ethiopia	13/7/2017
3	Stude_ID-01/564,G	Gerum	25	M	BD-SEME-03	Ethiopia	17/4/2020
4	Stude_ID-14/417,N	Natni	21	M	AA-YEKA-09	Ethiopia	21/11/2018
5	Stude_ID-29/528,A	Addis	32	F	AA-BOLE-13	Ethiopia	27/12/2016
6	Stude_ID-39/639,T	Tegaye	37	M	BD-JEMA-10	Ethiopia	3/1/2015
7	Stude_ID-16/537,Y	Yabsera	44	M	DD-HAYE-01	Ethiopia	16/6/2000
8	Stude_ID-32/519,S	Selam	48	F	AA-BOLE-00	Ethiopia	30/3/2018

Course table data

Course ID	Course dep code	Course Name	Course credit	Course Books	Stude_ID	Mark
+Cou_ID-0111 CHP	@ITS01	Connect Hardware Peripherals	2	"Add some file"	Stude_ID-21/213,B	95%
- Cou_ID-0710 AQS	%ITS17	Apply Quality Standards	1	"Add some file"	Stude_ID-03/897,M	80%
- Cou_ID-0810 WWO	#ITS28	Work with Others	1	"Add some file"	Stude_ID-01/564,G	75%
+ Cou_ID-0211 ISA	@ITS02	Install Software Application	3	"Add some file"	Stude_ID-14/417,N	90%
+ Cou_ID-0311 RCS	@ITS03	Record Client Support Requirements	2	"Add some file"	Stude_ID-29/528,A	60%
- Cou_ID-0910 RRW	#ITS29	Receive and Respond to Workplace Communication	1	"Add some file"	Stude_ID-39/639,T	40%
+ Cou_ID-0411 PAS	@ITS04	Protect Application or System Software	4	"Add some file"	Stude_ID-16/537,Y	55%

+ Cou_ID-0611 OPC	@ITS06	Operate Personal Computer	5	"Add some file"	Stude_ID-32/519,S	99%
- Cou_ID-1010 DWV	%ITS15	Demonstrate Work Values	1	"Add some file"	Stude_ID-21/213,B	65%
+ Cou_ID-1111 ODA	@ITS05	Database Application	5	"Add some file"	Stude_ID-03/897,M	100%

Teacher table data

Teach ID	Teach Name	Teach Age	Teach Sex	Teach Phone Number	Teach Email	Teach photo or...	Married Or Not	Which course	Teach Salary	Teach Secret code	Department code
@Teach 003	EWNTE	26	Male	(251)911-12-13-14	Tech@Egmail.com	"Add some file"	No	CHP, ISA, ODA	15,000	1234E	@ITS01
%Teach 301	YABSERA	35	Female	(251)912-13-14-15		"Add some file"	Married	AQS, DWV	3500		%ITS17
#Teach 211	MESKERM	49	Male	(251)913-14-15-16	Tech@Mgmail.com	"Add some file"	Yes	WWO, RRW	6500	123456M	#ITS28
@Teach 021	BETELEHEM	27	Female	(251)914-15-16-17	Tech@Bgmail.com	"Add some file"	Single	RCS, PAS, OPC	19,999	1234567B	@ITS02
#Teach 298	MEKONEN	39	Male	(251)915-16-17-18		"Add some file"	Married	WWO, RRW	5,500	12345678M	#ITS29

Task 3: create Form

Instruction: - under this task you are expected to create Forms between the Tables.

3 Create Form with **form wizard** or **form design** or **blank form** and add all table Fields

Student:-Name And ID

Course:-Course name and Mark

Teacher: - ID, Name and course giver

3.1 Create form for each table and insert the following data.

Inserting data: - Insert the following data using the form you create under **Task 3 on 3.1**

Student table data							
Number of student	ID	Name	Age	Sex	City	Country	Entering date
9	Stude_ID-90/203,E	Ermiyas	21	M	AA-YEKA-09	EthiopiA	20/8/2018
10	Stude_ID-99/193,M	Maramawit	19	F	DD-HAYE-15	EthiopiA	18/5/2017



Course table data						
Course ID	Course dep code	Course Name	Course credit	Course Books	Stude_ID	Mark
+Cou_ID-0111 ANHP	@ITS09	Administrative Network and hardware peripherals	4	"Add some file"	Stude_ID-90/203,E	95%
- Cou_ID-0900 DUE	%ITS16	Develop understanding of Entrepreneurship	2	"Add some file"	Stude_ID-99/193,M	70%

↻ Insert the new course to the Look up wizard on teacher table

Teacher table data											
Teach ID	Teach Name	Teach Age	Teach Sex	Teach Phone Number	Teach Email	Teach photo or...	Married Or Not	Which course	Teach Salary	Teach Secret e code	Department code
@Teach 369	Mulualem	29	Male	(251)919-20-21-22	Tech@Mugmail.com	"Add some file"	single	CHP, ANHP	15,000	91011M	@ITS09
%Teach 963	Hiwot	32	Female	(251)923-24-25-26	Tech@Hgmail.com	"Add some file"	Married	DUE	3500		%ITS16

Task 4: create Query

Instruction: - under this task you are expected to create Query.

- Select From Teacher Name Start With "M" and Age "<40"
 - All Information for this two question
- Select From Course & Teacher Table Start with "@" and Sex "Male" (From anywhere Course dep code and Teach ID)
 - From Course:-Course ID, Course Dep Code
 - From Teacher:-Teacher ID, Teacher Name, Teacher Sex
- Select From Student, Course and Teacher Table
 - Stud ID, Stud Name, Course ID, course Name, course credit, course book, Only IT teacher, there salary >10,000 , and there mark
- Select From Student name 2nd Letter "a" OR "d"
- Select From Teacher Name 5th Letter "e" OR 3rd Letter "K" And whose salary is ">1000"
 - All Information for all above question
- Select From Course name in some where letter "li"
- Select From course table whose name end with "S" or "N"
- Select From Teacher table whose name end with "M" and Age ">30" and not married make the order Ascending order
- Make parameter For Student name, Course dep code
- Make parameter For Teach sex(Female),Student sex(M) with their name



11. **(DO THE FOLLOWING BY CREATE COLUMN IN TABLE AND CALCULATE BY QUERY)**Add new column to calculate name **"Overtime"** and add for all 10% for all salary
12. Add other new column for Married **"House allowance"** 3000\$
13. Create **"Gross salary"** by adding House allowance and overtime
14. Create **"Pension"** Increase for all salary 7%
15. Create **"Income tax"** column to calculate the following
 - i. If salary <600 0%-0
 - ii. If salary <1650 10%-60
 - iii. If salary <3200 15%-142.5
 - iv. If salary <5250 20%-302.5
 - v. If salary <7800 25%-565
 - vi. If salary <10900 30%-955
 - vii. Otherwise 35%-1500
16. Add or Create Last Column called **"Net Salary"** calculate(Gross salary-pension-Income tax)
17. Make a 2 back up query for each table By a name ex:- 1st Back up student,2nd Backup Student... then save the query by name "Student back up1","Student back up2"...
18. Delete From 1st Backup which Course Name End with "n"
 - a. Their Credit equal to 5
 - b. Their Mark < 95
 - c. Course dept code @ITS 06 or 05
19. Append all you Delete in question 23-25 from other Backup
20. Update Male whose City is aa-yeka-09 to aa-bole-01
21. Update whose date is 2020 to 3/3/2018
22. Update whose Mark is <60 and credit 1 to Credit 2
23. Update Teacher table whose sex is Male add Ato In front of their Name
24. Update Teacher table whose sex is Female Add W/ro In front of their Name Make the order Descending.
25. Update Singe Net salary Decrease 200\$
26. Update Female whose dep code is Accounting there Net salary increase 7%
27. Make cross tab query to see the average of Mark make course name the column
28. Make cross tab query to see the sum of Net salary make their name column.
29. On student table add birth date and fill it by your interest then add Age column by query and calculate the Age.
30. On course table add mark and status by query and calculate like the following

a. Mark		Status
i. >90	A	Excellent
ii. >80	B	Very Good
iii. >70	C	Good
iv. >60	D	Bad
v. >50	F	fail
vi. Else	X	NG

Task 5: create Report

Instruction: - under this task you are expected to create Report.

- ∞ Create report for each tables
- ∞ Create Report for Course and teacher forms
- ∞ Create Report for all query questions.

Project 2:- Administrator Network and computer Hardware and Access and use Internet

- 1 Clime a network cable for connecting those two computers and show PING.
- 2 Share folder by creating in local disk D by your name and add your database work
- 3 Share printer by your name and print form other pc the database file
- 4 Assemble your computer hardware System unit CD-ROM, Hard disk, RAM, CMOS battery, all data cable and describe their function for your instructor and disassemble it.
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