



Credit Hours System
CMPN 401 - ADB



Cairo University
Faculty of Engineering



ADB PHASE 1 DELIVERY



Ahmed Mohamed Ismail	1180501
Mostafa Ashraf Ahmed	1180406
Moaz Mohamed ElSherbini	1180528
Nader Youhanna Khalil	1180477

1. Describe the existing system as well as hardware characteristics.

1.1. Operating System

Windows specifications

Edition	Windows 10 Home
Version	21H2
Installed on	14-Apr-21
OS build	19044.2251
Experience	Windows Feature Experience Pack 120.2212.4180.0

1.2. CPU and RAM

About

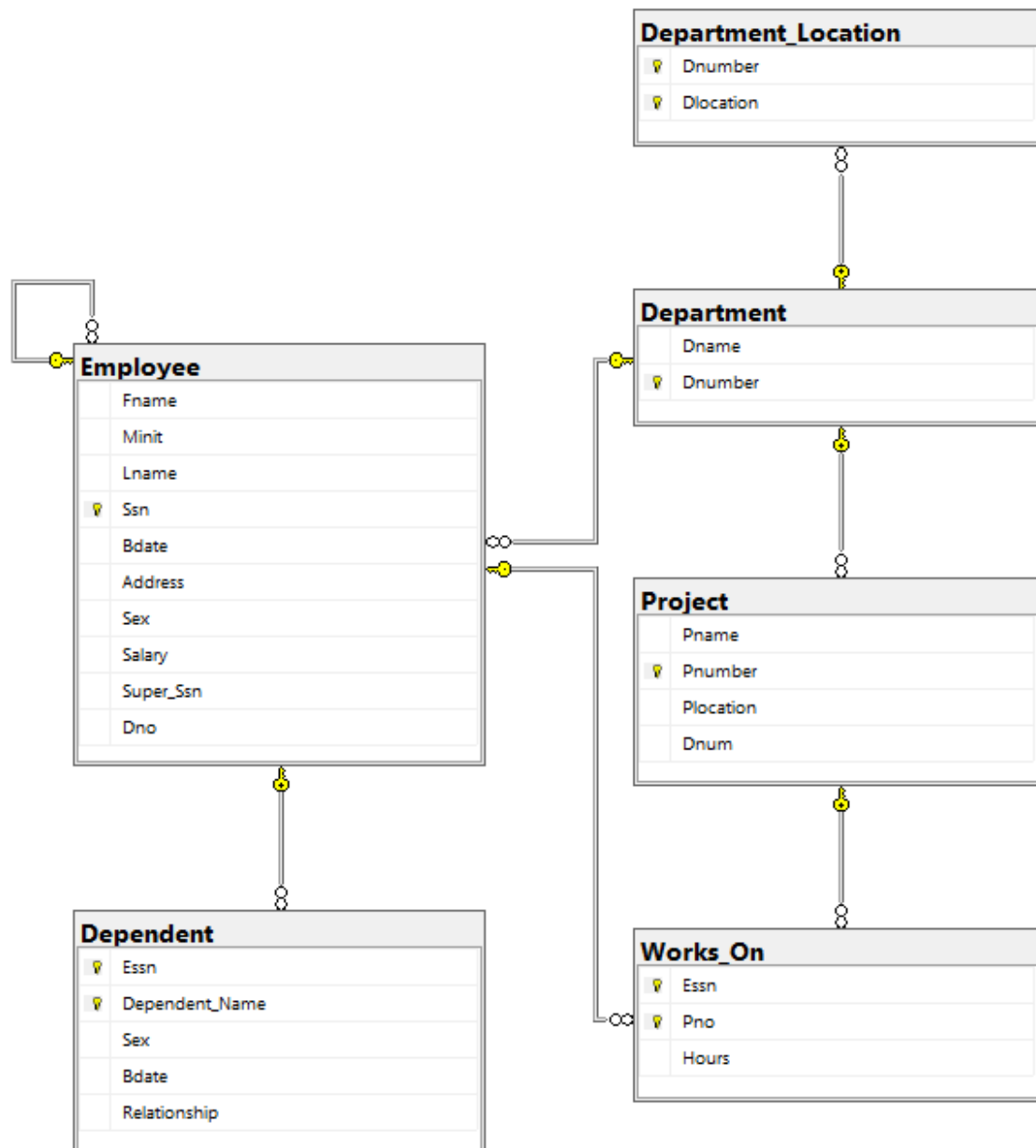
Device specifications

Device name	Mostafa-PC
Processor	Intel(R) Core(TM) i7-8550U CPU @ 1.80GHz 1.99 GHz
Installed RAM	8.00 GB (7.87 GB usable)
Device ID	B20B7A7C-9390-484B-BD0A-AE6F265E22A8
Product ID	00325-96314-54779-AAOEM
System type	64-bit operating system, x64-based processor
Pen and touch	No pen or touch input is available for this display

1.3. Hard Disk

Volume	Layout	Type	File System	Status	Capacity	Free Sp...	% Free	
(C:)	Simple	Basic	NTFS	Healthy (B...	350.00 GB	59.74 GB	17 %	
(Disk 0 partition 1)	Simple	Basic		Healthy (R...	499 MB	499 MB	100 %	
(Disk 0 partition 2)	Simple	Basic		Healthy (E...	99 MB	99 MB	100 %	
(Disk 1 partition 1)	Simple	Basic		Healthy (E...	650 MB	650 MB	100 %	
(Disk 1 partition 5)	Simple	Basic		Healthy (R...	814 MB	814 MB	100 %	
(Disk 1 partition 6)	Simple	Basic		Healthy (R...	13.22 GB	13.22 GB	100 %	
(Disk 1 partition 7)	Simple	Basic		Healthy (R...	1.14 GB	1.14 GB	100 %	
Backup (F:)	Simple	Basic	NTFS	Healthy (B...	765.59 GB	372.76 GB	49 %	
Mostafa (D:)	Simple	Basic	NTFS	Healthy (B...	115.16 GB	55.07 GB	48 %	
Programs (G:)	Simple	Basic	NTFS	Healthy (B...	150.00 GB	81.78 GB	55 %	

2. ER Diagram



3. Database Report

Table Name	Row Count	Main Key	Indexes	FK	Identity Column	Max Row Size (Bytes)
Employee	1M	Yes	1	2	Yes	71
Department	1M	Yes	1	1	Yes	19
Project	1M	Yes	1	1	Yes	38
Works_On	1M	No	1	2	No	12
Department_Location	1M	No	1	1	No	19
Dependent	1M	No	1	1	No	38

4. NOSQL

Department

<u>Storage size:</u> 26.56 MB	<u>Documents:</u> 1 M	<u>Avg. document size:</u> 63.00 B	<u>Indexes:</u> 1	<u>Total index size:</u> 10.81 MB
----------------------------------	--------------------------	---------------------------------------	----------------------	--------------------------------------

Department_Location

<u>Storage size:</u> 32.08 MB	<u>Documents:</u> 1 M	<u>Avg. document size:</u> 70.00 B	<u>Indexes:</u> 1	<u>Total index size:</u> 10.82 MB
----------------------------------	--------------------------	---------------------------------------	----------------------	--------------------------------------

Dependent

<u>Storage size:</u> 53.81 MB	<u>Documents:</u> 1 M	<u>Avg. document size:</u> 127.00 B	<u>Indexes:</u> 1	<u>Total index size:</u> 10.84 MB
----------------------------------	--------------------------	--	----------------------	--------------------------------------

Employee

<u>Storage size:</u> 113.49 MB	<u>Documents:</u> 1 M	<u>Avg. document size:</u> 208.00 B	<u>Indexes:</u> 1	<u>Total index size:</u> 10.96 MB
-----------------------------------	--------------------------	--	----------------------	--------------------------------------

Project

<u>Storage size:</u> 60.04 MB	<u>Documents:</u> 1 M	<u>Avg. document size:</u> 108.00 B	<u>Indexes:</u> 1	<u>Total index size:</u> 11.22 MB
----------------------------------	--------------------------	--	----------------------	--------------------------------------

Works_On

<u>Storage size:</u> 33.27 MB	<u>Documents:</u> 1 M	<u>Avg. document size:</u> 77.00 B	<u>Indexes:</u> 1	<u>Total index size:</u> 10.81 MB
----------------------------------	--------------------------	---------------------------------------	----------------------	--------------------------------------

5. MongoDB Collections

5.1. Employee

```
_id: ObjectId('63a4c212bd8e504a5a914332')  
Fname: "Marsha"  
Minit: "U"  
Lname: "Christy"  
Ssn: "278"  
Bdate: "24-May-56"  
Address: "WL74PM5IAIFSH2IV0"  
Sex: "M"  
Salary: "183575"  
Super_Ssn: "1348362999"  
Dno: "1561225838"
```

5.2. Department

```
_id: ObjectId('63a4c14bbd8e504a5a637c6f')  
Dname: "Darla"  
Dnumber: "92"
```

5.3. Department_Location

```
_id: ObjectId('63a4c187bd8e504a5a72beb0')  
Dnumber: "92"  
Dlocation: "MN2E28"
```

5.4. Project

```
_id: ObjectId('63a4c3c1bd8e504a5aa08573')  
Pname: "Rachael"  
Pnumber: "620"  
Plocation: "53DJPW1PF2NFU4"  
Dnum: "1773697524"
```

5.5. Dependent

```
_id: ObjectId('63a4c1bcbd8e504a5a8200f1')  
Essn: "278"  
Dependent_Name: "Candace"  
Sex: ""  
Bdate: "12-Aug-98"  
Relationship: "D9F1ZSINYAJ"
```

5.6. Works_On

```
_id: ObjectId('63a4c456bd8e504a5aafc7b5')  
Essn: "5868"  
Pno: "3868"  
Hours: "7390"
```