Course Name: Database Management Systems

Course Number: CS-4513-001

Semester: Fall 2019

Professor: Gia-Loi Gruenwald

Author: Nigel Mansell

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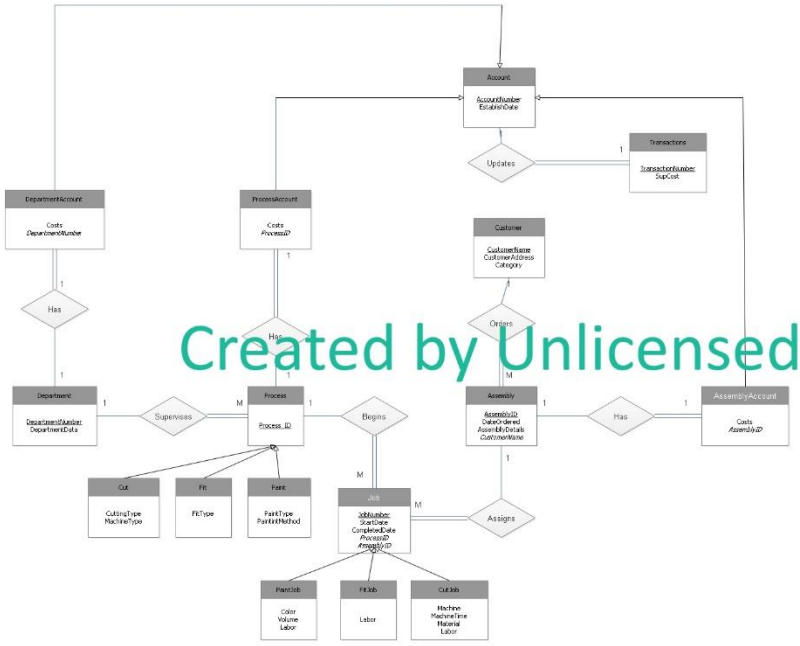
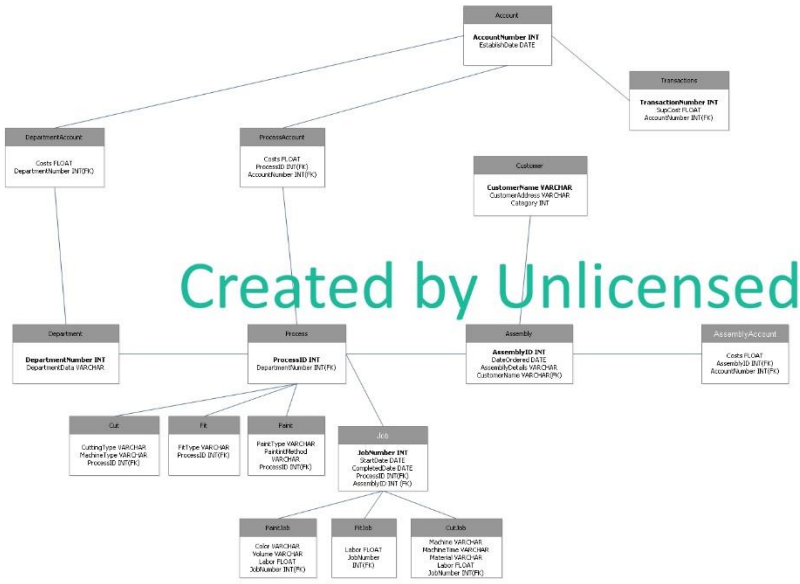
A JOB-SHOP ACCOUNTING SYSTEM

TASK 1





TASK 2

Customer

CustomerName varchar 85 bytes

Category int 4 bytes

Assembly

AssemblyID int 4 bytes

DateOrdered Date 3 bytes

CustomerName varchar 85 bytes

Process

ProcessID int 4 bytes

ProcessType varchar 85 bytes

DepartmentNumber int 4 bytes

Department

DepartmentNumber int 4 bytes

DepartmentData varchar 85 byte

Fit

FitType varchar 85 bytes

ProcessID int 4 bytes

Cut CuttingType varchar 85 bytes

MachineType varchar 85 bytes

Paint

paintType varchar 85 bytes

ProcessID int 4 bytes

Job

JobNumber int 4 bytes

ProcessID int 4 bytes

AssemblyID int 4 bytes

CompletionDate 3 bytes

FitJob

Labor time 5 bytes

JobNumber int 4 bytes

CutJob

Machine varchar 85 bytes

Machinetime time 5 bytes

Materials varchar 85 bytes

Labor time 5 bytes

JobNumber int 4 bytes

PaintJob

color varchar 85 bytes

Volume varchar 85 bytes

Labor time 5 bytes

JobNumber int 4 bytes

Account

accountnumber int 4 bytes

Establishdate date 3 bytes

Accounttype varchar 85 bytes

AssemblyAccount

costs double 76 bytes

ProcessID int 4 bytes

AccountNumber int 4 bytes

DeparmentAccount

costs double 76 bytes

ProcessID int 4 bytes

AccountNumber int 4 bytes

ProcessAccount

costs double 76 bytes

ProcessID int 4 bytes

AccountNumber int 4 bytes

Transaction

transactionnumber int 4 bytes

Supcost double 76 bytes

Accountnumber int 4 bytes

TASK 3

Table Name	Query# and Type	Search Key	Query Frequency	Selected File Organization	Justification
Customer	1	None	30/day	unordered	Better for inserting due to frequency
Department	2	none	infrequent	ordered	Efficiency isn't an issue
Assembly	3	none	40/day	unordered	Inserting
Process Fit Cut	4	none	infrequent	ordered	Efficiency isn't an issue

Paint					
Account AssemlyAccount DepartmentAccount ProcessAccount	5	none	10/day	unordered	Better for inserting due to frequency
Job	6	none	50/day	Heap file	Higher frequency needs faster than unordered
FitJob CutJob PaintJob	7	none	50/day	Heap file	Higher frequency needs faster than unordered
Transaction AssemblyAccunt DepartmentAccount ProcessAccount	8	Costs	50/day	Heap file	Higher frequency needs faster than unordered
AssemblyAccount	9	Costs	200/day	Hash table	Due to frequency, needs fastest therefore hash table
FitJob CutJob PaintJob	10	Labor	20/day	Ordered	Ordered is better at retrieval than unordered
Fit Cut Paint	11	ProcessID	100/day	B+ tree	Due to frequency, needs something between heap file and hash table
Job	12	Jobumber	20/day	Ordered	Ordered is better at retrieval than unordered
Customer	13	CustomerName	100/day	B+ tree	Primary key is already b-tree
CutJobs	14	JobNumber	1/month	Heap file	Primary key is already b-tree

PaintJob	15	Color	1/week	Heap File	Isn't being accessed enough to be indexed

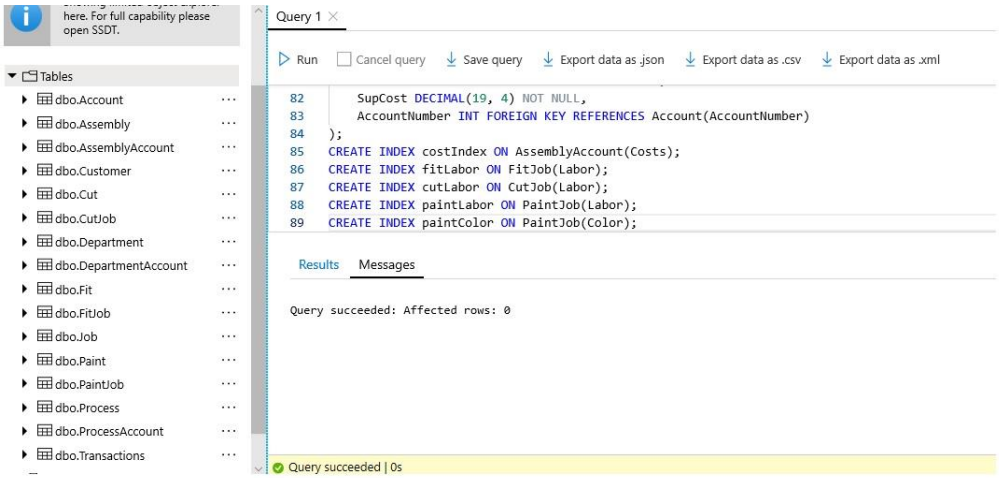
TASK 4

```
CREATE TABLE Customer (
   CustomerName VARCHAR(20) PRIMARY KEY NOT NULL,
   CustomerAddress VARCHAR(85) NOT NULL,
   Category INT NOT NULL
);

CREATE TABLE Department(
   DepartmentNumber INT PRIMARY KEY NOT NULL,
   DepartmentData VARCHAR(85) NOT NULL
);

CREATE TABLE Assembly(
   AssemblyID int PRIMARY KEY NOT NULL,
   DateOrdered DATE NOT NULL,
   AssemblyDetails VARCHAR(85) NOT NULL,
   CustomerName VARCHAR(20) FOREIGN KEY REFERENCES Customer(CustomerName)
);
CREATE TABLE Process (
   ProcessID int NOT NULL PRIMARY KEY,
   DepartmentNumber INT FOREIGN KEY REFERENCES Department(DepartmentNumber)
);
CREATE TABLE Fit(
   FitType VARCHAR(85) NOT NULL,
   ProcessID int FOREIGN KEY REFERENCES Process(ProcessID)
```

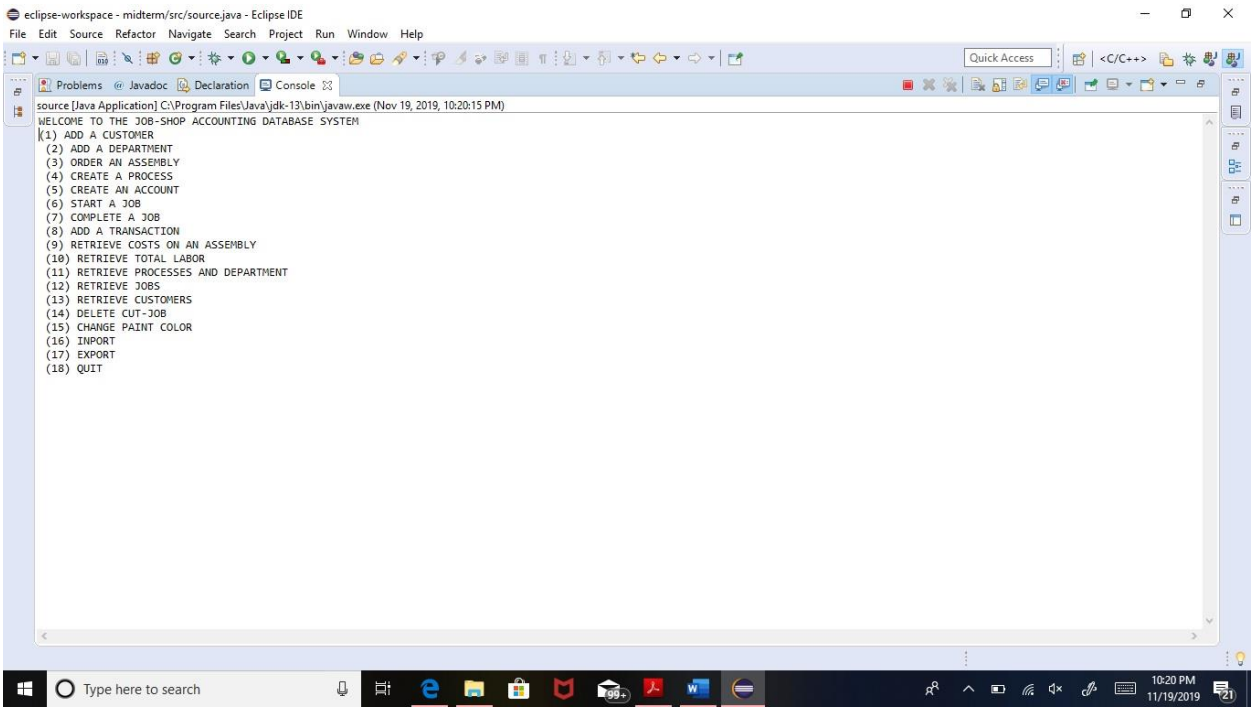
```
);
CREATE TABLE Paint(
   PaintType VARCHAR(85) NOT NULL,
   PaintingMethod VARCHAR(85) NOT NULL,
   ProcessID int FOREIGN KEY(ProcessID) REFERENCES Process(ProcessID)
);
CREATE TABLE Cut(
   CuttingType VARCHAR(85) NOT NULL,
   MachineType VARCHAR(85) NOT NULL,
   ProcessID int FOREIGN KEY(ProcessID) REFERENCES Process(ProcessID)
);

CREATE TABLE Account(
   AccountNumber INT PRIMARY KEY NOT NULL,
   EstablishDate DATE NOT NULL
);
CREATE TABLE AssemblyAccount(
   Costs DECIMAL(19, 4) NOT NULL,
   AccountNumber INT FOREIGN KEY(AccountNumber) REFERENCES Account(AccountNumber),
   AssemblyID INT FOREIGN KEY(AssemblyID) REFERENCES Assembly(AssemblyID)
);
CREATE TABLE DepartmentAccount(
   Costs DECIMAL(19, 4) NOT NULL,
   AccountNumber INT FOREIGN KEY(AccountNumber) REFERENCES Account(AccountNumber),
   DepartmentNumber INT FOREIGN KEY(DepartmentNumber) REFERENCES
Department(DepartmentNumber)
);
CREATE TABLE ProcessAccount(
   Costs DECIMAL(19, 4) NOT NULL,
```

```
    AccountNumber INT FOREIGN KEY(AccountNumber) REFERENCES Account(AccountNumber),
    ProcessID INT FOREIGN KEY(ProcessID) REFERENCES Process(ProcessID)
);
CREATE TABLE Job(
    JobNumber INT PRIMARY KEY NOT NULL,
    AssemblyID INT FOREIGN KEY REFERENCES Assembly(AssemblyID),
    ProcessID INT FOREIGN KEY REFERENCES Process(ProcessID),
    StartDate DATE NOT NULL,
    CompletionDate DATE
);
CREATE TABLE CutJob(
    Machine VARCHAR(85) NOT NULL,
    MachineTime TIME NOT NULL,
    Material VARCHAR(85) NOT NULL,
    Labor FLOAT NOT NULL,
    JobNumber INT FOREIGN KEY REFERENCES Job(JobNumber)
);
CREATE TABLE PaintJob(
    Color VARCHAR(85) NOT NULL,
    Volume VARCHAR(85) NOT NULL,
    Labor FLOAT NOT NULL,
    JobNumber INT FOREIGN KEY REFERENCES Job(JobNumber)
);
CREATE TABLE FitJob(
    Labor FLOAT NOT NULL,
    JobNumber INT FOREIGN KEY REFERENCES Job(JobNumber)
);
CREATE TABLE Transactions(
    TransactionNumber INT PRIMARY KEY NOT NULL,
```

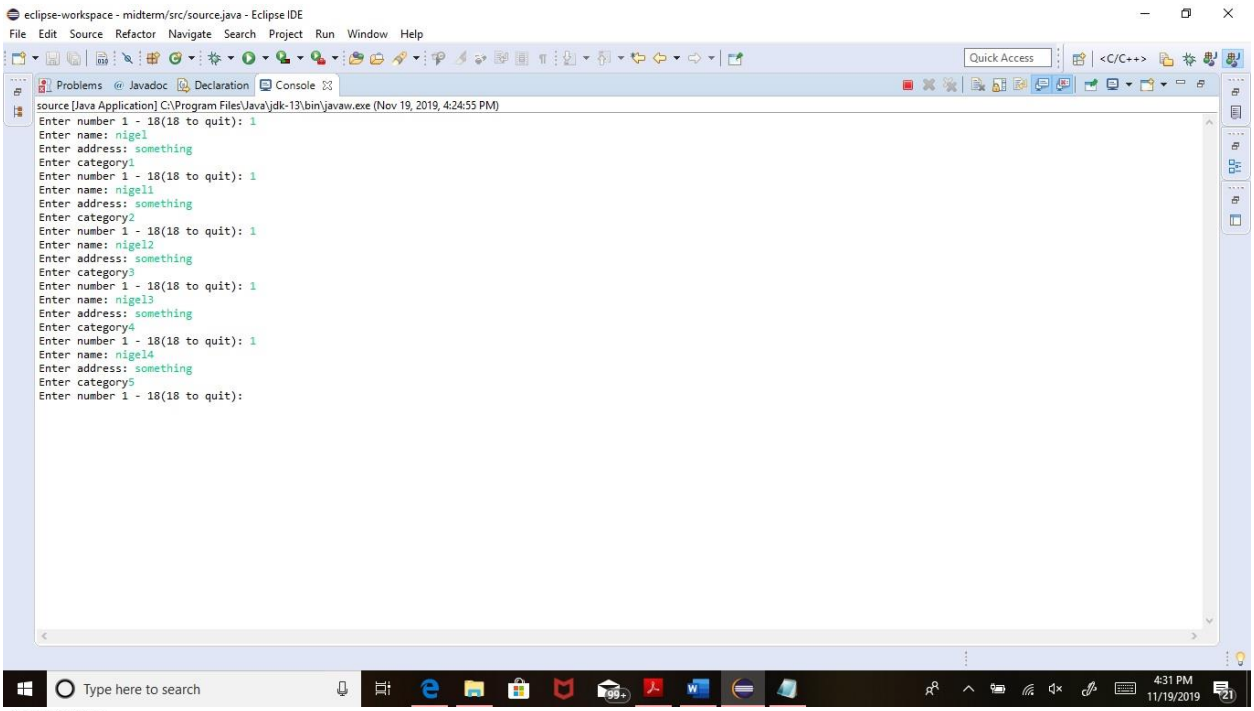
```
    SupCost DECIMAL(19, 4) NOT NULL,
    AccountNumber INT FOREIGN KEY REFERENCES Account(AccountNumber)
);
CREATE INDEX costIndex ON AssemblyAccount(Costs);
CREATE INDEX fitLabor ON FitJob(Labor);
CREATE INDEX cutLabor ON CutJob(Labor);
CREATE INDEX paintLabor ON PaintJob(Labor);
CREATE INDEX paintColor ON PaintJob(Color);
```



TASK 5


eclipse-workspace - midterm/src/source.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
Problems Javadoc Declaration Console
source [Java Application] C:\Program Files\Java\jdk-13\bin\javaw.exe (Nov 19, 2019, 10:20:15 PM)
WELCOME TO THE JOB-SHOP ACCOUNTING DATABASE SYSTEM
(1) ADD A CUSTOMER
(2) ADD A DEPARTMENT
(3) ORDER AN ASSEMBLY
(4) CREATE A PROCESS
(5) CREATE AN ACCOUNT
(6) START A JOB
(7) COMPLETE A JOB
(8) ADD A TRANSACTION
(9) RETRIEVE COSTS ON AN ASSEMBLY
(10) RETRIEVE TOTAL LABOR
(11) RETRIEVE PROCESSES AND DEPARTMENT
(12) RETRIEVE JOBS
(13) RETRIEVE CUSTOMERS
(14) DELETE CUT-JOB
(15) CHANGE PAINT COLOR
(16) INPORT
(17) EXPORT
(18) QUIT
Type here to search
10:20 PM
11/19/2019

TASK 6

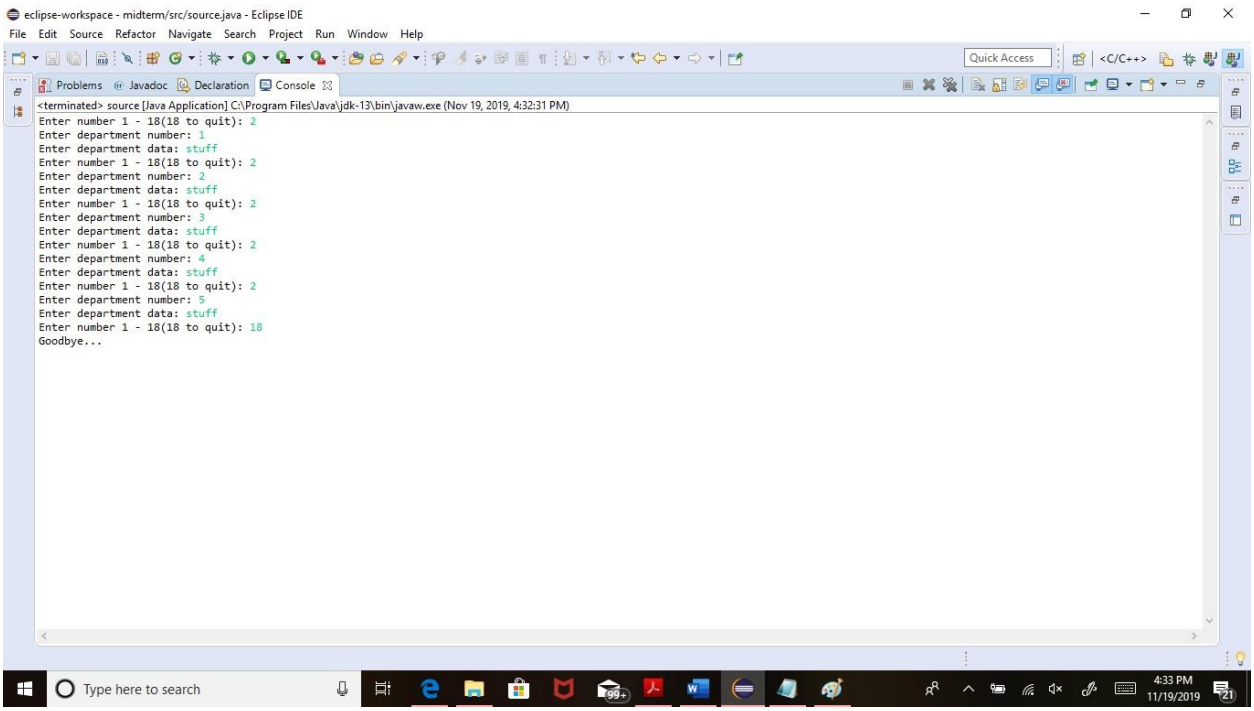


dbo.Customer

Create New Row | Save | Refresh | Discard | Delete Row

Search to filter items...

CustomerName	CustomerAddress	Category
nigel	something	1
nigel1	something	2
nigel2	something	3
nigel3	something	4
nigel4	something	5

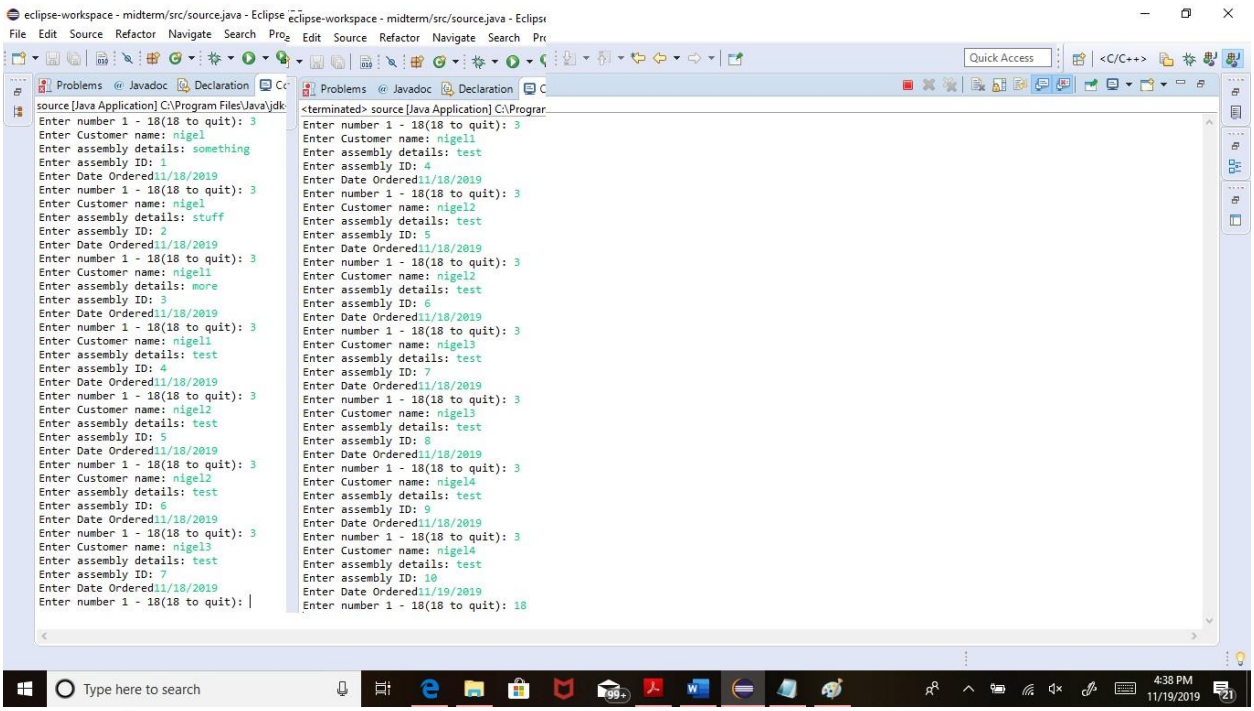


dbo.Department

Create New Row | Save | Refresh | Discard | Delete Row

Search to filter items...

DepartmentNumber	DepartmentData
1	stuff
2	stuff
3	stuff
4	stuff
5	stuff

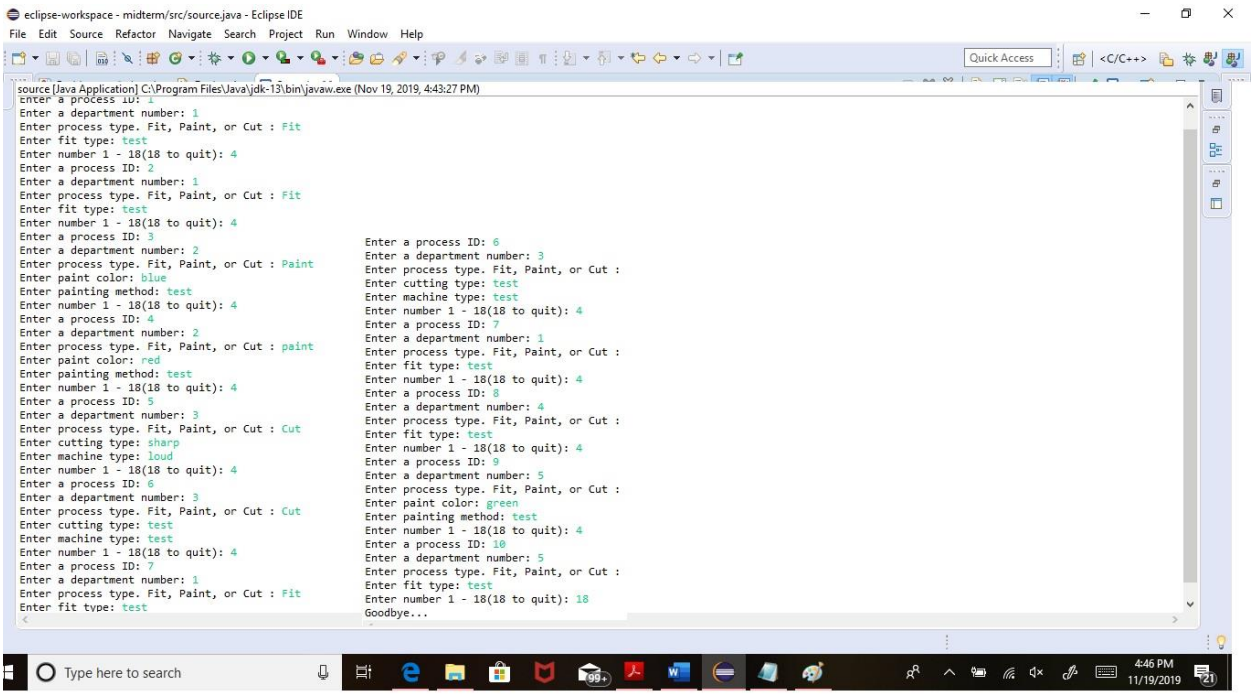


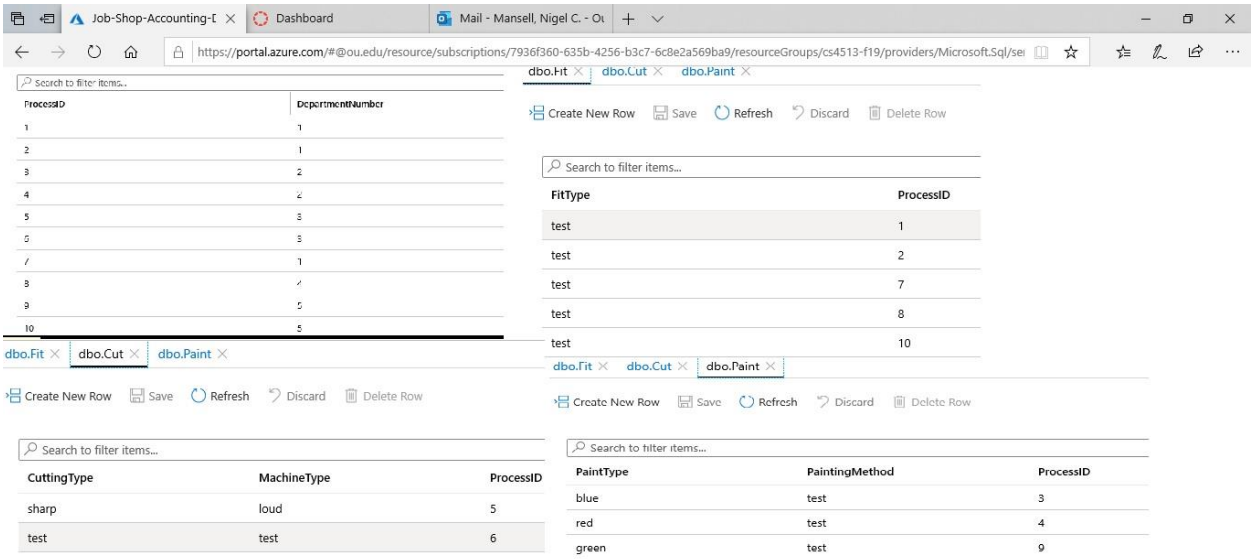
bo.Assembly

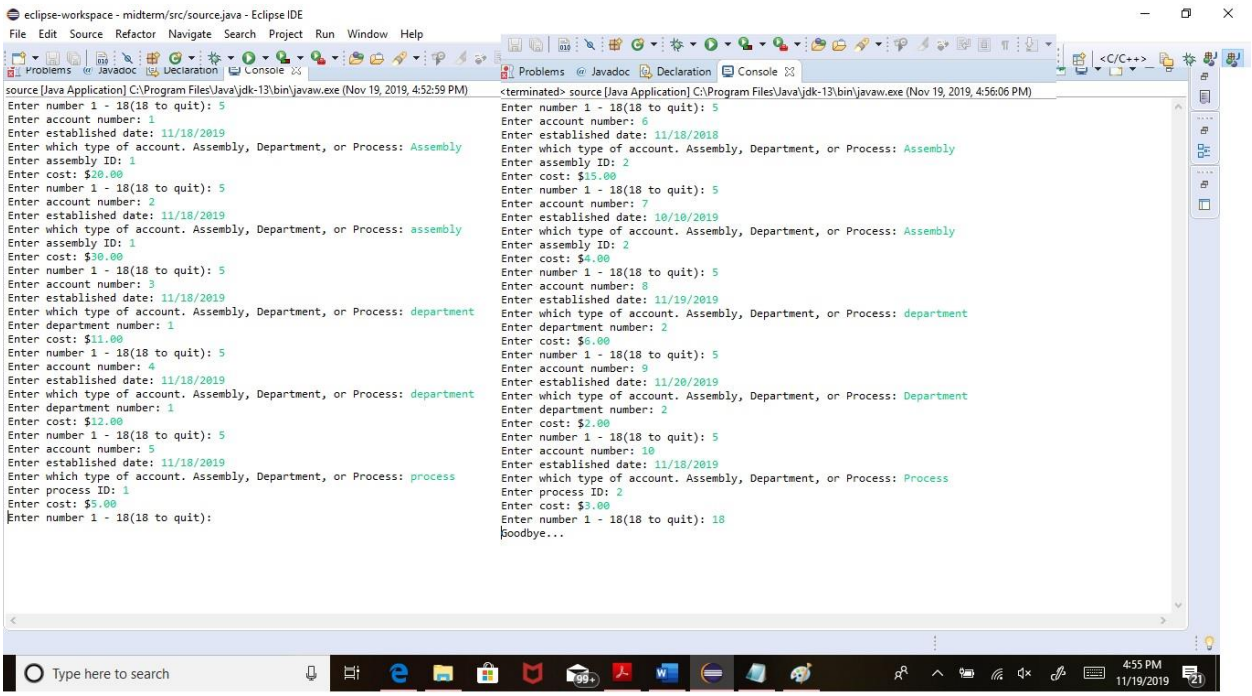
Create New Row | Save | Refresh | Discard | Delete Row

Search to filter items...

AssemblyID	DateOrdered	AssemblyDetails	CustomerName
1	2019-11-18T00:00:00.0000000	something	nigel
2	2019-11-18T00:00:00.0000000	stuff	nigel
3	2019-11-18T00:00:00.0000000	more	nigel1
4	2019-11-18T00:00:00.0000000	test	nigel1
5	2019-11-18T00:00:00.0000000	test	nigel2
6	2019-11-18T00:00:00.0000000	test	nigel2
7	2019-11-18T00:00:00.0000000	test	nigel3
8	2019-11-18T00:00:00.0000000	test	nigel3
9	2019-11-18T00:00:00.0000000	test	nigel4
10	2019-11-19T00:00:00.0000000	test	nigel4


eclipse-workspace - midterm/src/source.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
source [Java Application] C:\Program Files\Java\jdk-13\bin\javaw.exe (Nov 19, 2019, 4:43:27 PM)
Enter a process ID: 1
Enter a department number: 1
Enter process type. Fit, Paint, or Cut : Fit
Enter fit type: test
Enter number 1 - 18(18 to quit): 4
Enter a process ID: 2
Enter a department number: 1
Enter process type. Fit, Paint, or Cut : Fit
Enter fit type: test
Enter number 1 - 18(18 to quit): 4
Enter a process ID: 3
Enter a department number: 2
Enter process type. Fit, Paint, or Cut : Paint
Enter paint color: blue
Enter painting method: test
Enter number 1 - 18(18 to quit): 4
Enter a process ID: 4
Enter a department number: 2
Enter process type. Fit, Paint, or Cut : paint
Enter paint color: red
Enter painting method: test
Enter number 1 - 18(18 to quit): 4
Enter a process ID: 5
Enter a department number: 3
Enter process type. Fit, Paint, or Cut : Cut
Enter cutting type: sharp
Enter machine type: loud
Enter number 1 - 18(18 to quit): 4
Enter a process ID: 6
Enter a department number: 3
Enter process type. Fit, Paint, or Cut : Cut
Enter cutting type: test
Enter machine type: test
Enter number 1 - 18(18 to quit): 4
Enter a process ID: 7
Enter a department number: 1
Enter process type. Fit, Paint, or Cut : Fit
Enter fit type: test
Enter a process ID: 6
Enter a department number: 3
Enter process type. Fit, Paint, or Cut :
Enter cutting type: test
Enter machine type: test
Enter number 1 - 18(18 to quit): 4
Enter a process ID: 7
Enter a department number: 1
Enter process type. Fit, Paint, or Cut :
Enter fit type: test
Enter number 1 - 18(18 to quit): 4
Enter a process ID: 8
Enter a department number: 4
Enter process type. Fit, Paint, or Cut :
Enter fit type: test
Enter number 1 - 18(18 to quit): 4
Enter a process ID: 9
Enter a department number: 5
Enter process type. Fit, Paint, or Cut :
Enter paint color: green
Enter painting method: test
Enter number 1 - 18(18 to quit): 4
Enter a process ID: 10
Enter a department number: 5
Enter process type. Fit, Paint, or Cut :
Enter fit type: test
Enter number 1 - 18(18 to quit): 18
Goodbye...
Type here to search
4:46 PM
11/19/2019


Job-Shop-Accounting-D
Dashboard
Mail - Mansell, Nigel C. - Ou
https://portal.azure.com/#@ou.edu/resource/subscriptions/7936f360-635b-4256-b3c7-6c8e2a569ba9/resourceGroups/cs4513-f19/providers/Microsoft.Sql/se
Search to filter items...
ProcessID
DepartmentNumber
1 1
2 1
3 2
4 2
5 3
6 3
7 1
8 2
9 5
10 5
dbo.Fit
dbo.Cut
dbo.Paint
Create New Row
Save
Refresh
Discard
Delete Row
FitType
ProcessID
test 1
test 2
test 7
test 8
test 10
CuttingType
MachineType
ProcessID
sharp loud 5
test test 6
PaintType
PaintingMethod
ProcessID
blue test 3
red test 4
green test 9



dbo.Account | dbo.AssemblyAccount | dbo.DepartmentAccount | dbo.ProcessAccount

Create New Row | Save | Refresh | Discard | Delete Row

Search to filter items...

AccountNumber	EstablishDate
1	2019-11-18T00:00:00.0000000
2	2019-11-18T00:00:00.0000000
3	2019-11-18T00:00:00.0000000
4	2019-11-18T00:00:00.0000000
5	2019-11-18T00:00:00.0000000
6	2018-11-18T00:00:00.0000000
7	2019-10-10T00:00:00.0000000
8	2019-11-19T00:00:00.0000000
9	2019-11-20T00:00:00.0000000
10	2019-11-18T00:00:00.0000000

dbo.Account | dbo.AssemblyAccount | dbo.DepartmentAccount | dbo.ProcessAccount

Create New Row | Save | Refresh | Discard | Delete Row

Search to filter items...

Costs	AccountNumber	AssemblyID
20.0000	1	1
30.0000	2	1
15.0000	6	2
4.0000	7	2

dbo.Account | dbo.AssemblyAccount | dbo.DepartmentAccount | dbo.ProcessAccount

Create New Row | Save | Refresh | Discard | Delete Row

Search to filter items...

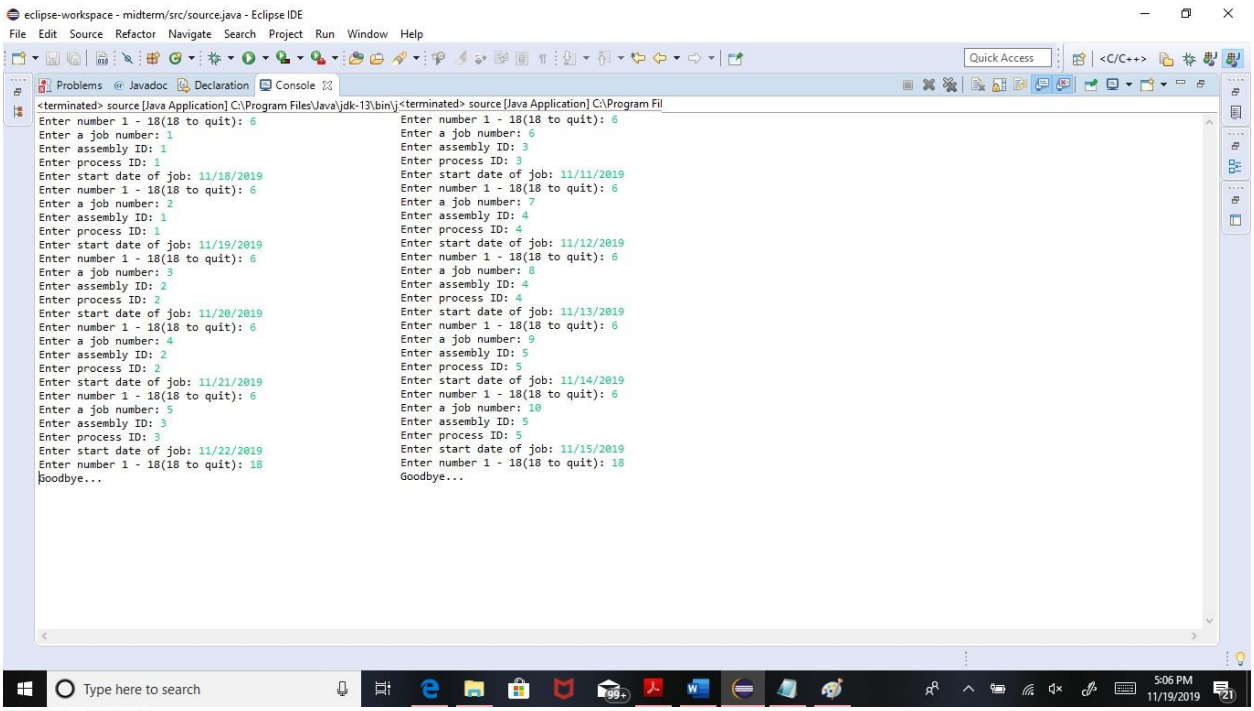
Costs	AccountNumber	DepartmentNumber
11.0000	3	1
12.0000	4	1
6.0000	8	2
2.0000	9	2

dbo.Account | dbo.AssemblyAccount | dbo.DepartmentAccount | dbo.ProcessAccount

Create New Row | Save | Refresh | Discard | Delete Row

Search to filter items...

Costs	AccountNumber	ProcessID
5.0000	5	1
3.0000	10	2



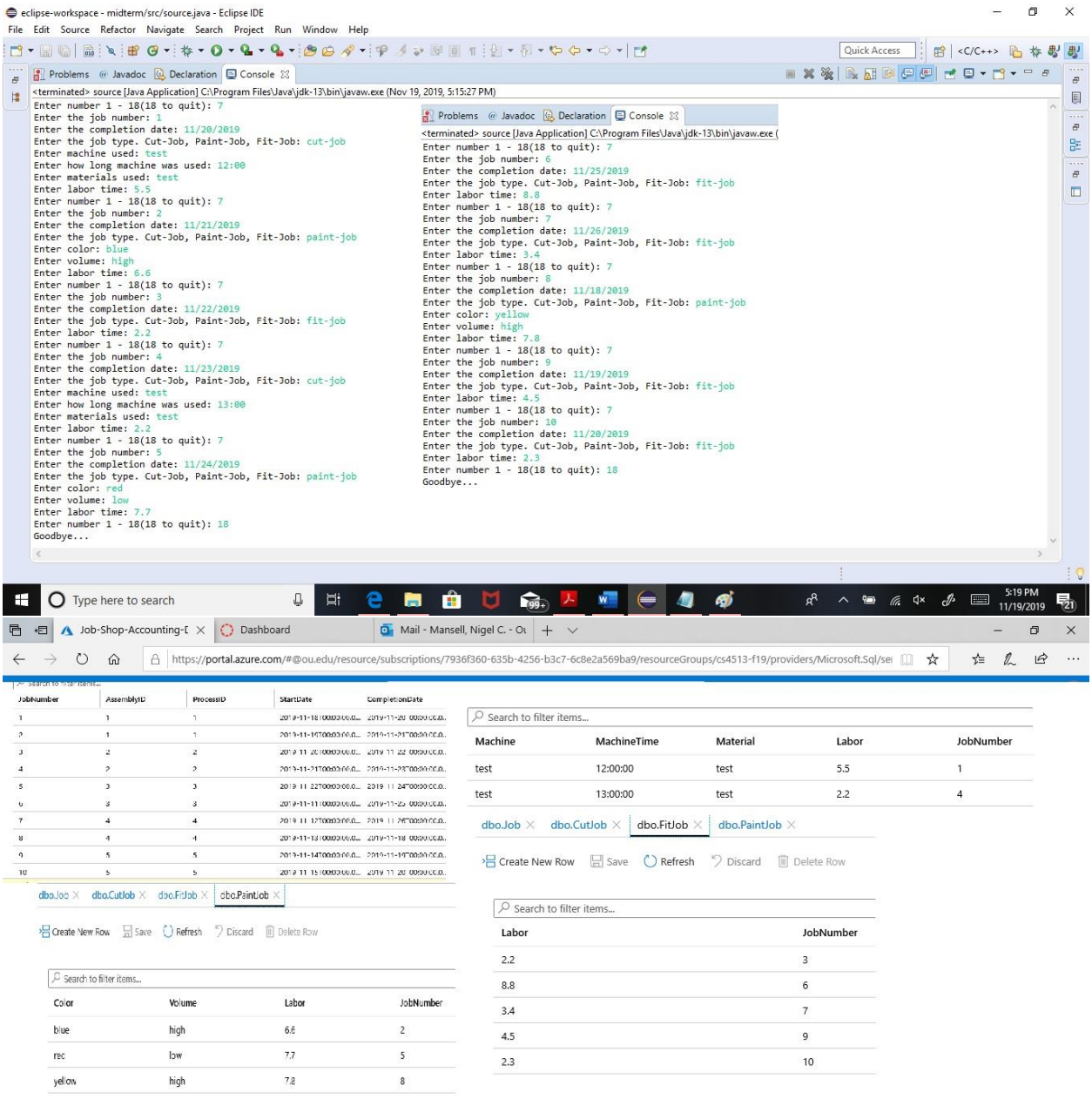
Query 1 | dbo.Job

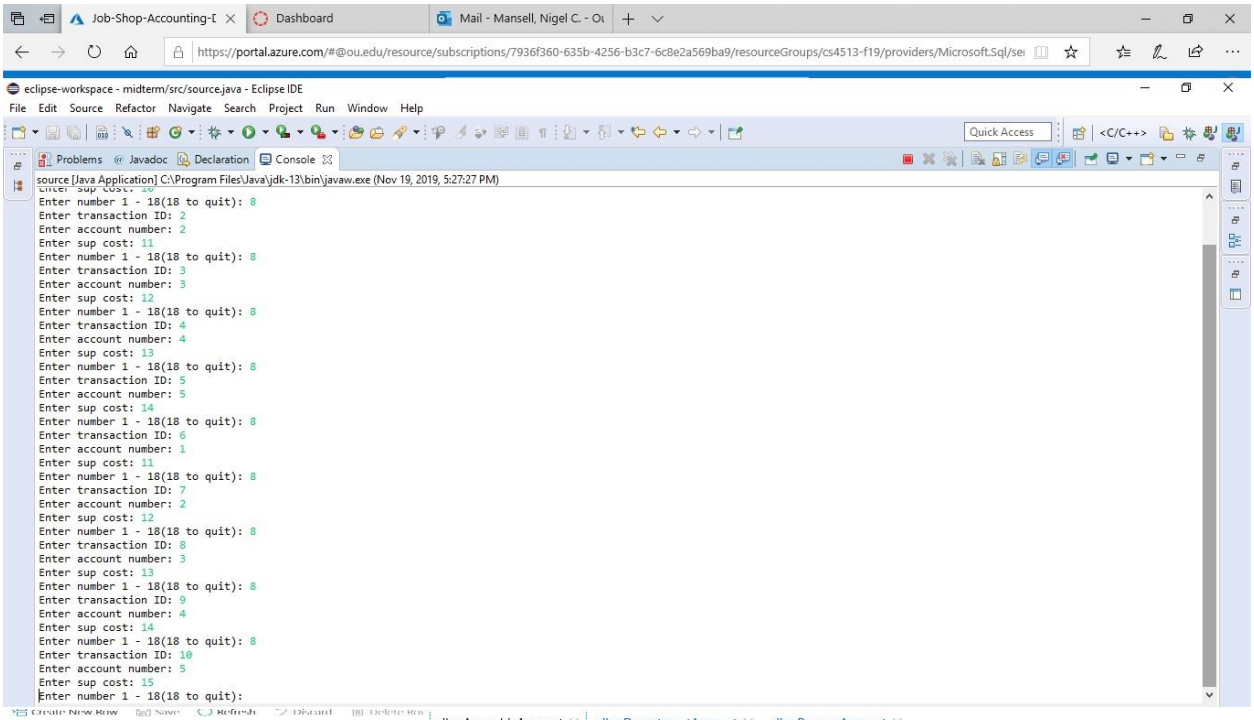
Create New Row | Save | Refresh | Discard | Delete Row

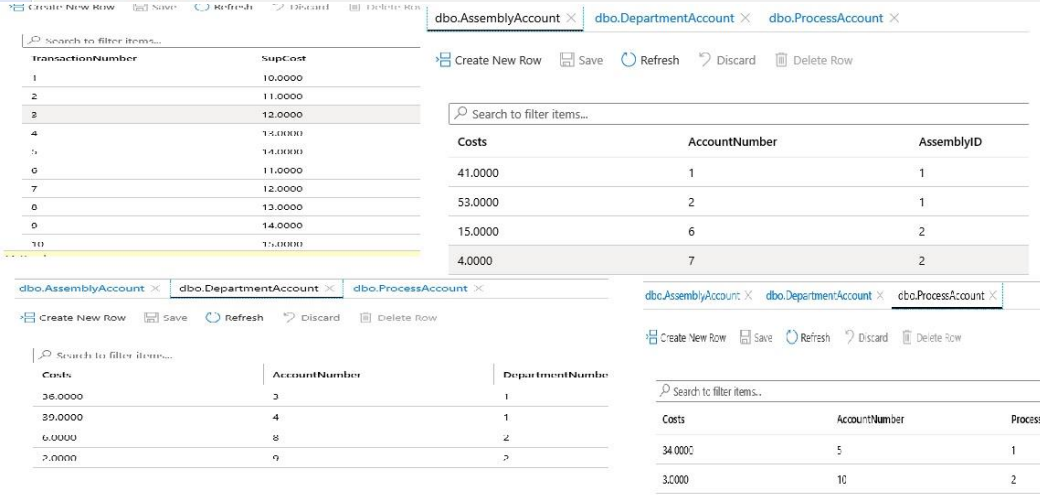
Search to filter items...

JobNumber	AssemblyID	ProcessID	StartDate	CompletionDate
1	1	1	2019-11-18T00:00:00.0...	
2	1	1	2019-11-19T00:00:00.0...	
3	2	2	2019-11-20T00:00:00.0...	
4	2	2	2019-11-21T00:00:00.0...	
5	3	3	2019-11-22T00:00:00.0...	
6	3	3	2019-11-11T00:00:00.0...	
7	4	4	2019-11-12T00:00:00.0...	
8	4	4	2019-11-13T00:00:00.0...	
9	5	5	2019-11-14T00:00:00.0...	
10	5	5	2019-11-15T00:00:00.0...	

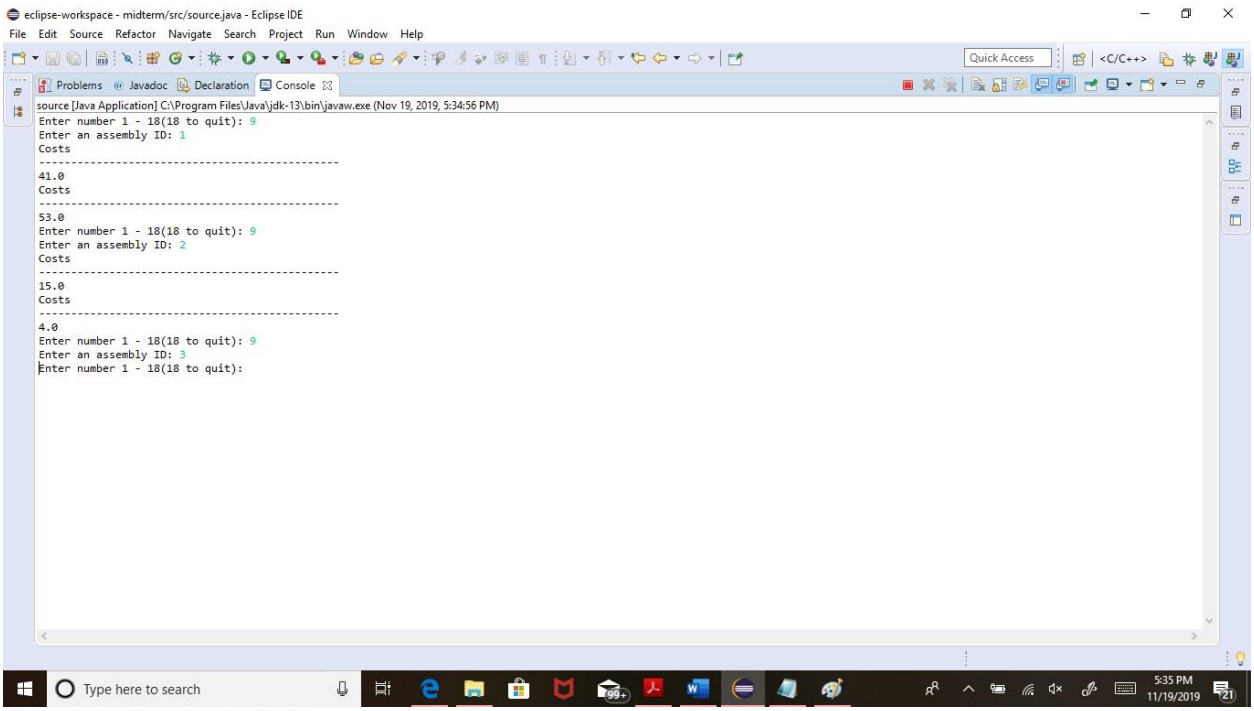
Ready

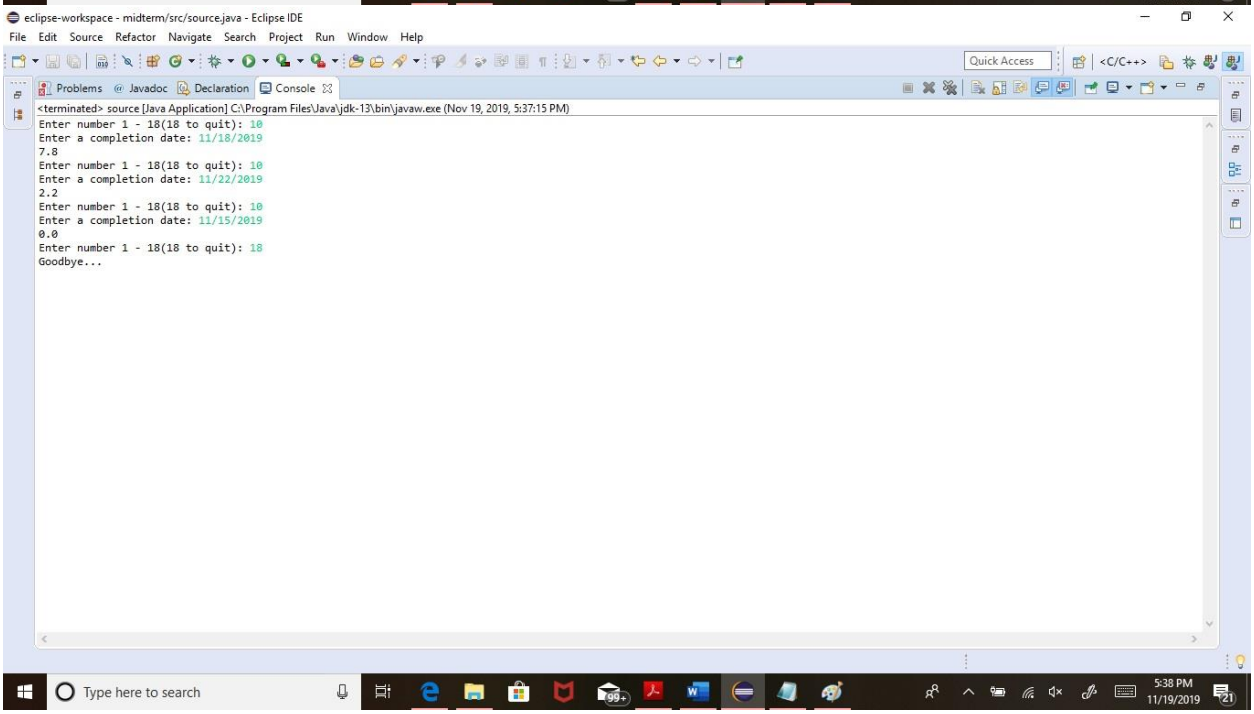

eclipse-workspace - midterm/src/source.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Problems Javadoc Declaration Console
<terminated> source [Java Application] C:\Program Files\Java\jdk-13\bin\javaw.exe (Nov 19, 2019, 5:15:27 PM)
Enter number 1 - 18(18 to quit): 7
Enter the job number: 1
Enter the completion date: 11/20/2019
Enter the job type. Cut-Job, Paint-Job, Fit-Job: cut-job
Enter machine used: test
Enter how long machine was used: 12:00
Enter materials used: test
Enter labor time: 5.5
Enter number 1 - 18(18 to quit): 7
Enter the job number: 2
Enter the completion date: 11/21/2019
Enter the job type. Cut-Job, Paint-Job, Fit-Job: paint-job
Enter color: blue
Enter volume: high
Enter labor time: 6.6
Enter number 1 - 18(18 to quit): 7
Enter the job number: 3
Enter the completion date: 11/22/2019
Enter the job type. Cut-Job, Paint-Job, Fit-Job: fit-job
Enter labor time: 2.2
Enter number 1 - 18(18 to quit): 7
Enter the job number: 4
Enter the completion date: 11/23/2019
Enter the job type. Cut-Job, Paint-Job, Fit-Job: cut-job
Enter machine used: test
Enter how long machine was used: 13:00
Enter materials used: test
Enter labor time: 2.2
Enter number 1 - 18(18 to quit): 7
Enter the job number: 5
Enter the completion date: 11/24/2019
Enter the job type. Cut-Job, Paint-Job, Fit-Job: paint-job
Enter color: red
Enter volume: low
Enter labor time: 7.7
Enter number 1 - 18(18 to quit): 18
Goodbye...
Problems Javadoc Declaration Console
<terminated> source [Java Application] C:\Program Files\Java\jdk-13\bin\javaw.exe (
Enter number 1 - 18(18 to quit): 7
Enter the job number: 6
Enter the completion date: 11/25/2019
Enter the job type. Cut-Job, Paint-Job, Fit-Job: fit-job
Enter labor time: 8.8
Enter number 1 - 18(18 to quit): 7
Enter the job number: 7
Enter the completion date: 11/26/2019
Enter the job type. Cut-Job, Paint-Job, Fit-Job: fit-job
Enter labor time: 3.4
Enter number 1 - 18(18 to quit): 7
Enter the job number: 8
Enter the completion date: 11/18/2019
Enter the job type. Cut-Job, Paint-Job, Fit-Job: paint-job
Enter color: yellow
Enter volume: high
Enter labor time: 7.8
Enter number 1 - 18(18 to quit): 7
Enter the job number: 9
Enter the completion date: 11/19/2019
Enter the job type. Cut-Job, Paint-Job, Fit-Job: fit-job
Enter labor time: 4.5
Enter number 1 - 18(18 to quit): 7
Enter the job number: 10
Enter the completion date: 11/20/2019
Enter the job type. Cut-Job, Paint-Job, Fit-Job: fit-job
Enter labor time: 2.3
Enter number 1 - 18(18 to quit): 18
Goodbye...
Type here to search
5:19 PM
11/19/2019
Job-Shop-Accounting-D
Dashboard
Mail - Mansell, Nigel C. - Ou
https://portal.azure.com/#@ou.edu/resource/subscriptions/7936f360-635b-4256-b3c7-6c8e2a569ba9/resourceGroups/cs4513-f19/providers/Microsoft.Sql/se
JobNumber AssemblyID ProcessID StartDate CompletionDate
Search to filter items...
Machine MachineTime Material Labor JobNumber
test 12:00:00 test 5.5 1
test 13:00:00 test 2.2 4
dbo.Job dbo.CutJob dbo.FitJob dbo.PaintJob
Create New Row Save Refresh Discard Delete Row
Search to filter items...
Color Volume Labor JobNumber
blue high 6.6 2
red low 7.7 5
yellow high 7.8 8
Search to filter items...
Labor JobNumber
2.2 3
8.8 6
3.4 7
4.5 9
2.3 10

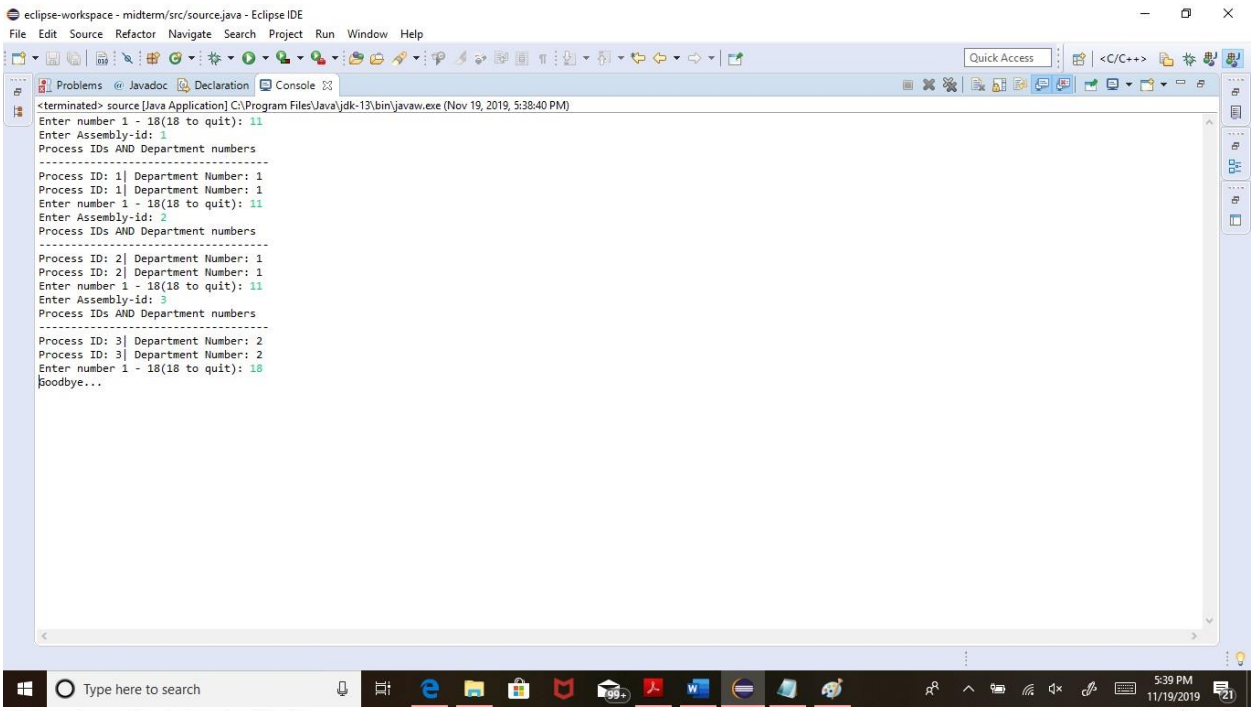

Job-Shop-Accounting-[
Dashboard
Mail - Mansell, Nigel C. - Ou
https://portal.azure.com/#@ou.edu/resource/subscriptions/7936f360-635b-4256-b3c7-6c8e2a569ba9/resourceGroups/cs4513-f19/providers/Microsoft.Sql/ser
eclipse-workspace - midterm/src/source.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
<C/C++>
Problems Javadoc Declaration Console
source [Java Application] C:\Program Files\Java\jdk-13\bin\javaw.exe (Nov 19, 2019, 5:27:27 PM)
Enter number 1 - 18(18 to quit): 8
Enter transaction ID: 2
Enter account number: 2
Enter sup cost: 11
Enter number 1 - 18(18 to quit): 8
Enter transaction ID: 3
Enter account number: 3
Enter sup cost: 12
Enter number 1 - 18(18 to quit): 8
Enter transaction ID: 4
Enter account number: 4
Enter sup cost: 13
Enter number 1 - 18(18 to quit): 8
Enter transaction ID: 5
Enter account number: 5
Enter sup cost: 14
Enter number 1 - 18(18 to quit): 8
Enter transaction ID: 6
Enter account number: 1
Enter sup cost: 11
Enter number 1 - 18(18 to quit): 8
Enter transaction ID: 7
Enter account number: 2
Enter sup cost: 12
Enter number 1 - 18(18 to quit): 8
Enter transaction ID: 8
Enter account number: 3
Enter sup cost: 13
Enter number 1 - 18(18 to quit): 8
Enter transaction ID: 9
Enter account number: 4
Enter sup cost: 14
Enter number 1 - 18(18 to quit): 8
Enter transaction ID: 10
Enter account number: 5
Enter sup cost: 15
Enter number 1 - 18(18 to quit):

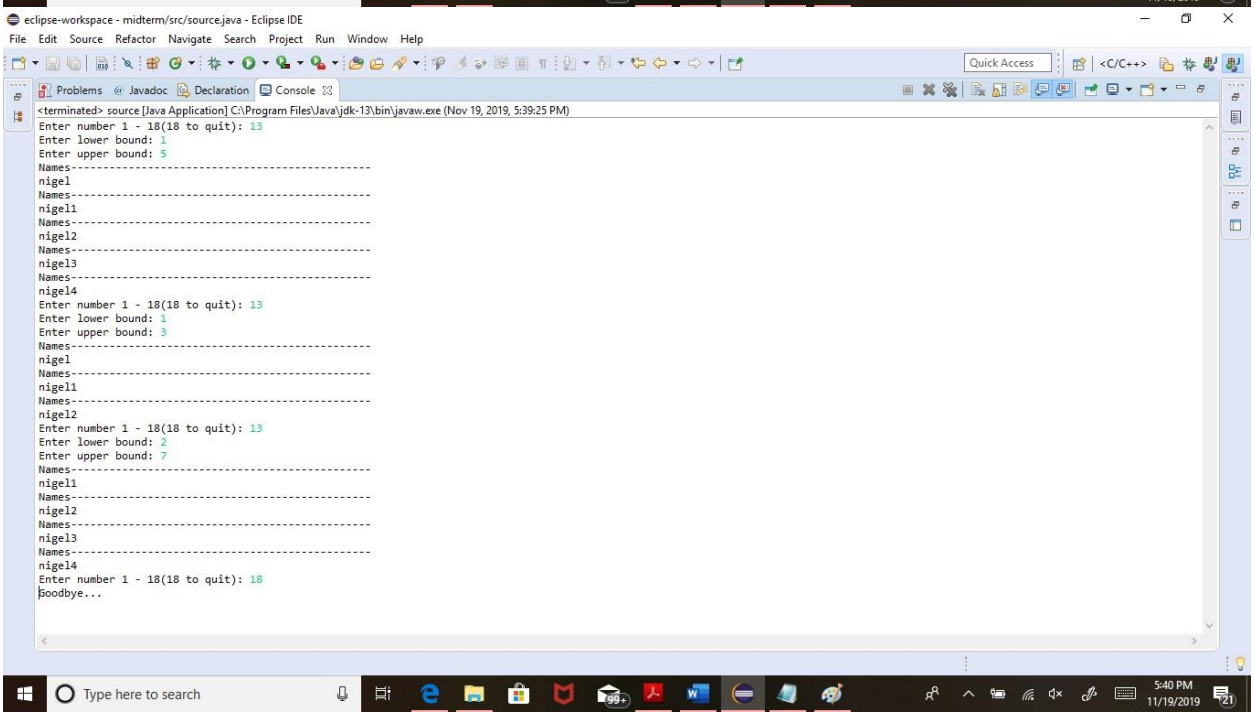

dbo.AssemblyAccount
dbo.DepartmentAccount
dbo.ProcessAccount
Create New Row
Save
Refresh
Discard
Delete Row
Search to filter items...
Costs
AccountNumber
AssemblyID
41.0000
1
1
53.0000
2
1
15.0000
6
2
4.0000
7
2

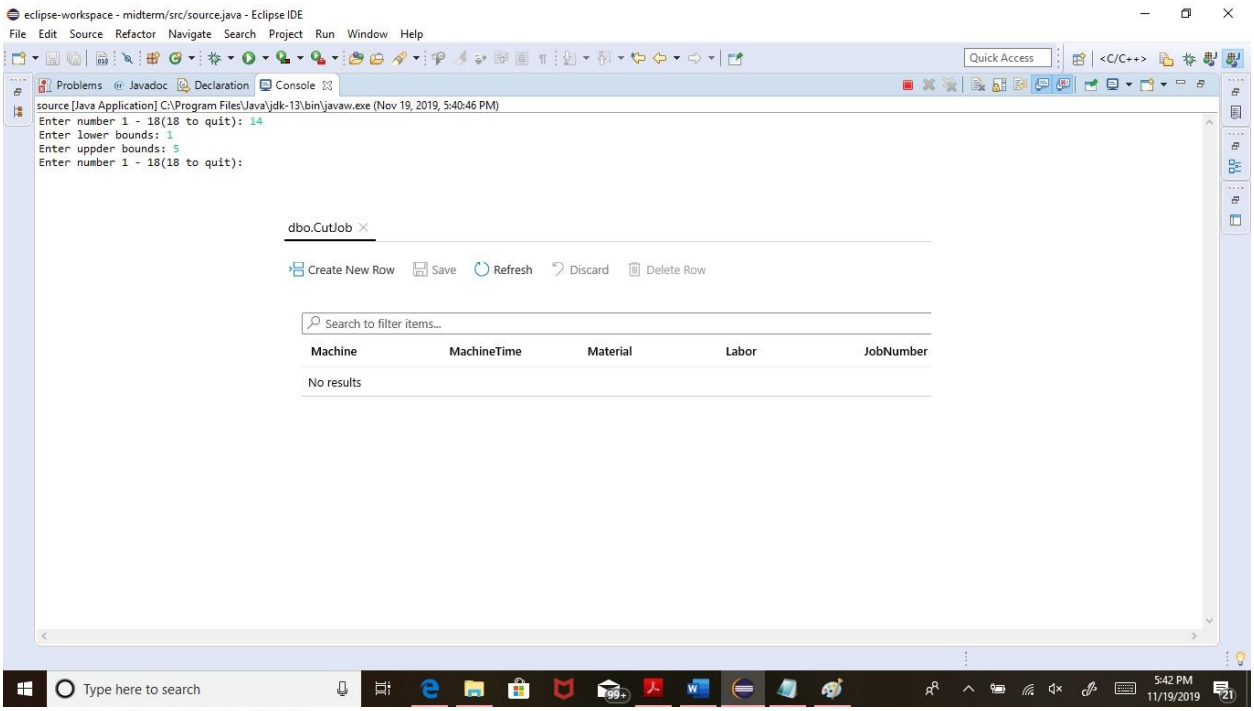
dbo.AssemblyAccount
dbo.DepartmentAccount
dbo.ProcessAccount
Create New Row
Save
Refresh
Discard
Delete Row
Search to filter items...
Costs
AccountNumber
ProcessID
34.0000
5
1
3.0000
10
2

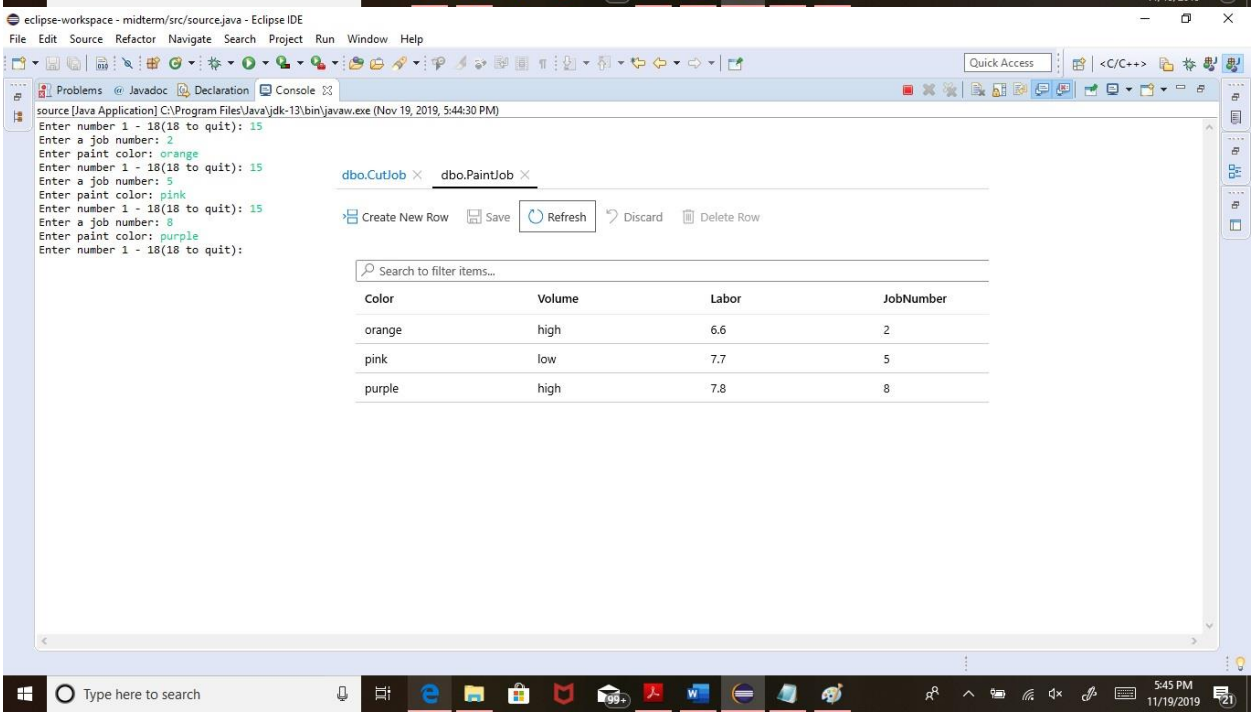

eclipse-workspace - midterm/src/source.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
Problems Javadoc Declaration Console
source [Java Application] C:\Program Files\Java\jdk-13\bin\javaw.exe (Nov 19, 2019, 5:34:56 PM)
Enter number 1 - 18(18 to quit): 9
Enter an assembly ID: 1
Costs
41.0
Costs
53.0
Enter number 1 - 18(18 to quit): 9
Enter an assembly ID: 2
Costs
15.0
Costs
4.0
Enter number 1 - 18(18 to quit): 9
Enter an assembly ID: 3
Enter number 1 - 18(18 to quit):
Type here to search
5:35 PM
11/19/2019


eclipse-workspace - midterm/src/source.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
Problems Javadoc Declaration Console
<terminated> source [Java Application] C:\Program Files\Java\jdk-13\bin\javaw.exe (Nov 19, 2019, 5:37:15 PM)
Enter number 1 - 18(18 to quit): 10
Enter a completion date: 11/18/2019
7.8
Enter number 1 - 18(18 to quit): 10
Enter a completion date: 11/22/2019
2.2
Enter number 1 - 18(18 to quit): 10
Enter a completion date: 11/15/2019
0.0
Enter number 1 - 18(18 to quit): 18
Goodbye...
Type here to search
5:38 PM
11/19/2019


eclipse-workspace - midterm/src/source.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
<C/C++>
Problems Javadoc Declaration Console
<terminated> source [Java Application] C:\Program Files\Java\jdk-13\bin\javaw.exe (Nov 19, 2019, 5:38:40 PM)
Enter number 1 - 18(18 to quit): 11
Enter Assembly-id: 1
Process IDs AND Department numbers
Process ID: 1| Department Number: 1
Process ID: 1| Department Number: 1
Enter number 1 - 18(18 to quit): 11
Enter Assembly-id: 2
Process IDs AND Department numbers
Process ID: 2| Department Number: 1
Process ID: 2| Department Number: 1
Enter number 1 - 18(18 to quit): 11
Enter Assembly-id: 3
Process IDs AND Department numbers
Process ID: 3| Department Number: 2
Process ID: 3| Department Number: 2
Enter number 1 - 18(18 to quit): 18
Goodbye...
Type here to search
5:39 PM
11/19/2019


eclipse-workspace - midterm/src/source.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
<C/C++>
Problems Javadoc Declaration Console
<terminated> source [Java Application] C:\Program Files\Java\jdk-13\bin\javaw.exe (Nov 19, 2019, 5:39:25 PM)
Enter number 1 - 18(18 to quit): 13
Enter lower bound: 1
Enter upper bound: 5
Names----------
nigel
Names----------
nigel1
Names----------
nigel2
Names----------
nigel3
Names----------
nigel4
Enter number 1 - 18(18 to quit): 13
Enter lower bound: 1
Enter upper bound: 3
Names----------
nigel
Names----------
nigel1
Names----------
nigel2
Enter number 1 - 18(18 to quit): 13
Enter lower bound: 2
Enter upper bound: 7
Names----------
nigel1
Names----------
nigel2
Names----------
nigel3
Names----------
nigel4
Enter number 1 - 18(18 to quit): 18
Goodbye...
Type here to search
5:40 PM
11/19/2019


eclipse-workspace - midterm/src/source.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
Problems Javadoc Declaration Console
source [Java Application] C:\Program Files\Java\jdk-13\bin\javaw.exe (Nov 19, 2019, 5:40:46 PM)
Enter number 1 - 18(18 to quit): 14
Enter lower bounds: 1
Enter uppder bounds: 5
Enter number 1 - 18(18 to quit):
dbo.CutJob
Create New Row
Save
Refresh
Discard
Delete Row
Search to filter items...
Machine
MachineTime
Material
Labor
JobNumber
No results
Type here to search
5:42 PM
11/19/2019


eclipse-workspace - midterm/src/source.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
Problems Javadoc Declaration Console
source [Java Application] C:\Program Files\Java\jdk-13\bin\javaw.exe (Nov 19, 2019, 5:44:30 PM)
Enter number 1 - 18(18 to quit): 15
Enter a job number: 2
Enter paint color: orange
Enter number 1 - 18(18 to quit): 15
Enter a job number: 5
Enter paint color: pink
Enter number 1 - 18(18 to quit): 15
Enter a job number: 8
Enter paint color: purple
Enter number 1 - 18(18 to quit):
dbo.CutJob
dbo.PaintJob
Create New Row
Save
Refresh
Discard
Delete Row
Search to filter items...
Color
Volume
Labor
JobNumber
orange
high
6.6
2
pink
low
7.7
5
purple
high
7.8
8
Type here to search
5:45 PM
11/19/2019

TASK 7


localhost/query13_form2.html
Category Range 1: 1
Customer Range 2: 12
Submit
localhost/query13.php
nigel nigel1 nigel2 nigel3 nigel4


localhost/query1_form1.html
Customer name: nigel6
Customer Address: somthing
Catagory: 6
Submit
localhost/query13.php
nigel nigel1 nigel2 nigel3 nigel4 nigel6