# SQL with Multiple Tables

By,

Bharath Venkatesh Srinivasan

**Question: Show me the vendors and the products they supply to us for products that cost less than $100**

Translation: List of all the vendor names and product names where product cost is less than $100

Cleanup: Select vendornames from Vendor table and productnames from Product table where retailprice is less than $100

Query:

select v.VendName , p.ProductName

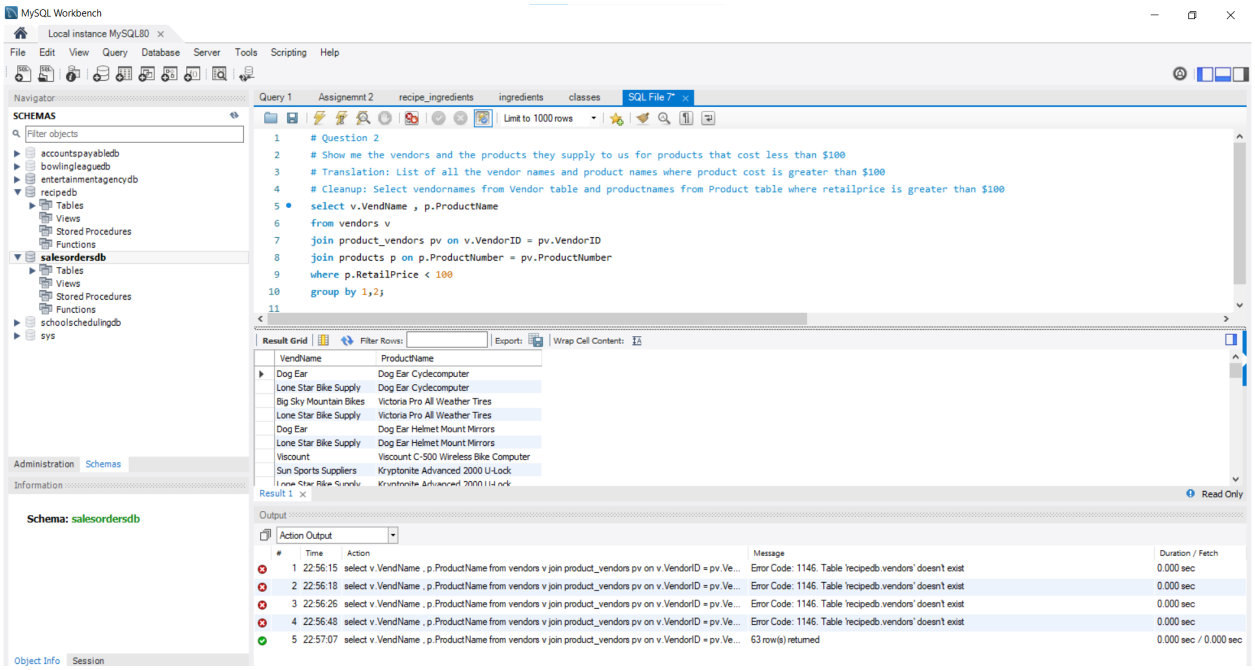
from vendors v

join product_vendors pv on v.VendorID = pv.VendorID

join products p on p.ProductNumber = pv.ProductNumber

where p.RetailPrice < 100

group by 1,2;



Schema: salesordersdb

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# Question 2
# Show me the vendors and the products they supply to us for products that cost less than $100
# Translation: List of all the vendor names and product names where product cost is greater than $100
# Cleanup: Select vendornames from Vendor table and productnames from Product table where retailprice is greater than $100
select v.VendName , p.ProductName
from vendors v
join product_vendors pv on v.VendorID = pv.VendorID
join products p on p.ProductNumber = pv.ProductNumber
where p.RetailPrice < 100
group by 1,2;
```

| VendName | ProductName |
|---|---|
| Dog Ear | Dog Ear Cyclecomputer |
| Lone Star Bike Supply | Dog Ear Cyclecomputer |
| Big Sky Mountain Bikes | Victoria Pro All Weather Tires |
| Lone Star Bike Supply | Victoria Pro All Weather Tires |
| Dog Ear | Dog Ear Helmet Mount Mirrors |
| Lone Star Bike Supply | Dog Ear Helmet Mount Mirrors |
| Viscount | Viscount C-500 Wireless Bike Computer |
| Sun Sports Suppliers | Kryptonite Advanced 2000 U-Lock |
| Lone Star Bike Supply | Kryptonite Advanced 2000 U-Lock |

```
#  Time      Action                                                                          Message                                               Duration / Fetch
1  22:56:15  select v.VendName , p.ProductName from vendors v join product_vendors pv on v.VendorID = pv.Ve...  Error Code: 1146. Table 'recipedb.vendors' doesn't exist  0.000 sec
2  22:56:18  select v.VendName , p.ProductName from vendors v join product_vendors pv on v.VendorID = pv.Ve...  Error Code: 1146. Table 'recipedb.vendors' doesn't exist  0.000 sec
3  22:56:26  select v.VendName , p.ProductName from vendors v join product_vendors pv on v.VendorID = pv.Ve...  Error Code: 1146. Table 'recipedb.vendors' doesn't exist  0.000 sec
4  22:56:48  select v.VendName , p.ProductName from vendors v join product_vendors pv on v.VendorID = pv.Ve...  Error Code: 1146. Table 'recipedb.vendors' doesn't exist  0.000 sec
5  22:57:07  select v.VendName , p.ProductName from vendors v join product_vendors pv on v.VendorID = pv.Ve...  63 row(s) returned                                    0.000 sec / 0.000 sec
```

**Question: Find the agents and entertainers who live in the same postal code.**

Translation: Select all agents and entertainers who has same postal code

Cleanup: Select agentFirstName, agentLastName from agents and entertainers stage name from entertainers table where zip code is same for both agent and entertainer

Query:

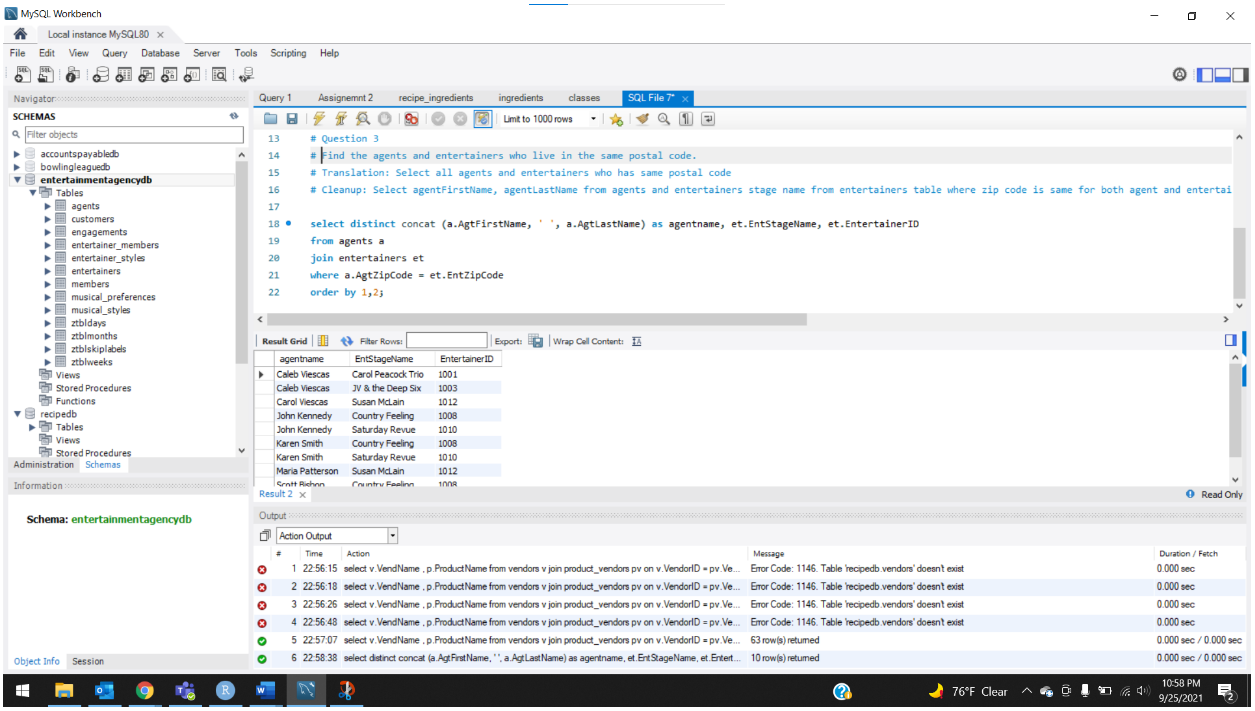
select distinct concat (a.AgtFirstName, ' ', a.AgtLastName) as agentname, et.EntStageName, et.EntertainerID

from agents a

join entertainers et

where a.AgtZipCode = et.EntZipCode

order by 1,2;



```
# Question 3
# Find the agents and entertainers who live in the same postal code.
# Translation: Select all agents and entertainers who has same postal code
# Cleanup: Select agentFirstName, agentLastName from agents and entertainers stage name from entertainers table where zip code is same for both agent and entertai

select distinct concat (a.AgtFirstName, ' ', a.AgtLastName) as agentname, et.EntStageName, et.EntertainerID
from agents a
join entertainers et
where a.AgtZipCode = et.EntZipCode
order by 1,2;
```

| agentname | EntStageName | EntertainerID |
|---|---|---|
| Caleb Viescas | Carol Peacock Trio | 1001 |
| Caleb Viescas | JV & the Deep Six | 1003 |
| Carol Viescas | Susan McLain | 1012 |
| John Kennedy | Country Feeling | 1008 |
| John Kennedy | Saturday Revue | 1010 |
| Karen Smith | Country Feeling | 1008 |
| Karen Smith | Saturday Revue | 1010 |
| Maria Patterson | Susan McLain | 1012 |
| Scott Bishop | Country Feeling | 1008 |

```
#  Time      Action                                                                               Message                                              Duration / Fetch
1  22:56:15  select v.VendName , p.ProductName from vendors v join product_vendors pv on v.VendorID = pv.Ve...  Error Code: 1146. Table 'recipedb.vendors' doesn't exist  0.000 sec
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5  22:57:07  select v.VendName , p.ProductName from vendors v join product_vendors pv on v.VendorID = pv.Ve...  63 row(s) returned                                     0.000 sec / 0.000 sec
6  22:58:38  select distinct concat (a.AgtFirstName, ' ', a.AgtLastName) as agentname, et.EntStageName, et.Entert...  10 row(s) returned                          0.000 sec / 0.000 sec
```

**Question: Display all recipe classes and any recipes that might be associated with them.**

Translation: Select all recipe classes and the recipes if any associated with recipe classes

Cleanup: Select recipeclasses from recipe_classes table and preparation from recipes table that re present in recipe_classes

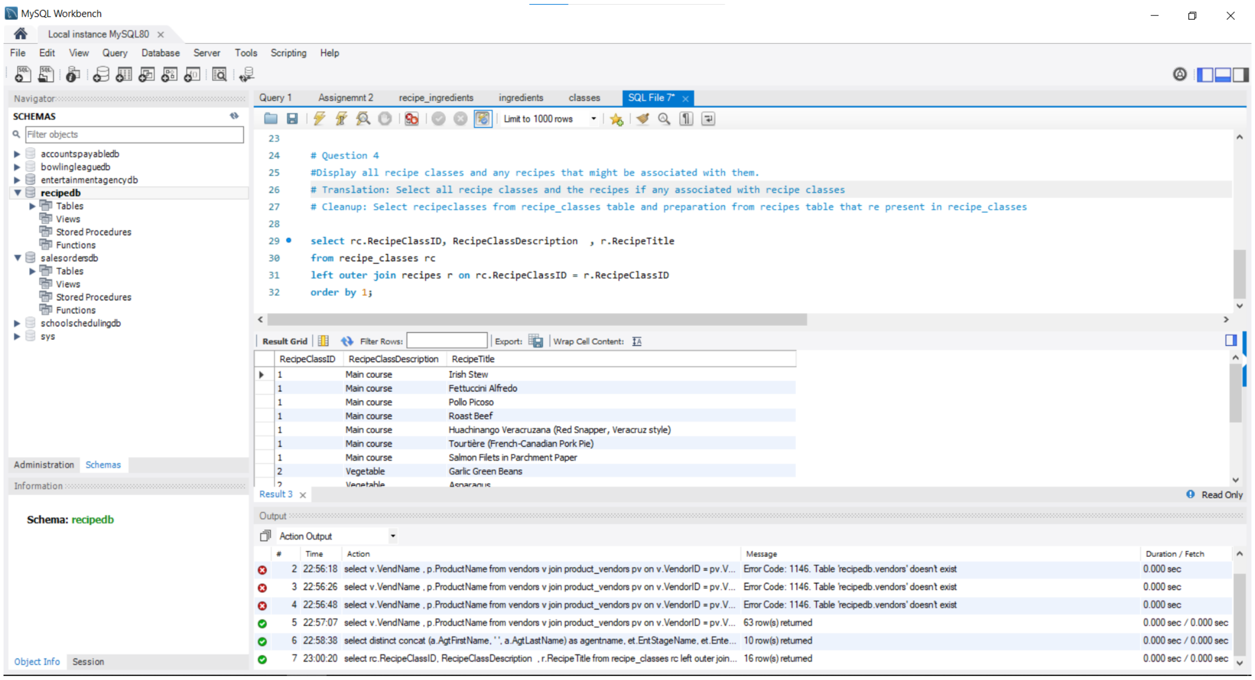
Query:

select rc.RecipeClassID, RecipeClassDescription  , r.RecipeTitle

from recipe_classes rc

left outer join recipes r on rc.RecipeClassID = r.RecipeClassID

order by 1;



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# Question 4
#Display all recipe classes and any recipes that might be associated with them.
# Translation: Select all recipe classes and the recipes if any associated with recipe classes
# Cleanup: Select recipeclasses from recipe_classes table and preparation from recipes table that re present in recipe_classes

select rc.RecipeClassID, RecipeClassDescription  , r.RecipeTitle
from recipe_classes rc
left outer join recipes r on rc.RecipeClassID = r.RecipeClassID
order by 1;
```

| RecipeClassID | RecipeClassDescription | RecipeTitle |
|---|---|---|
| 1 | Main course | Irish Stew |
| 1 | Main course | Fettuccini Alfredo |
| 1 | Main course | Pollo Picoso |
| 1 | Main course | Roast Beef |
| 1 | Main course | Huachinango Veracruzana (Red Snapper, Veracruz style) |
| 1 | Main course | Tourtière (French-Canadian Pork Pie) |
| 1 | Main course | Salmon Filets in Parchment Paper |
| 2 | Vegetable | Garlic Green Beans |
| 2 | Vegetable | Asparagus |

```
#  Time      Action                                                                          Message                                               Duration / Fetch
2  22:56:18  select v.VendName , p.ProductName from vendors v join product_vendors pv on v.VendorID = pv.V...  Error Code: 1146. Table 'recipedb.vendors' doesn't exist  0.000 sec
3  22:56:26  select v.VendName , p.ProductName from vendors v join product_vendors pv on v.VendorID = pv.V...  Error Code: 1146. Table 'recipedb.vendors' doesn't exist  0.000 sec
4  22:56:48  select v.VendName , p.ProductName from vendors v join product_vendors pv on v.VendorID = pv.V...  Error Code: 1146. Table 'recipedb.vendors' doesn't exist  0.000 sec
5  22:57:07  select v.VendName , p.ProductName from vendors v join product_vendors pv on v.VendorID = pv.V...  63 row(s) returned  0.000 sec / 0.000 sec
6  22:58:38  select distinct concat (a.AgtFirstName, ' ', a.AgtLastName) as agentname, et.EntStageName, et.Ente...  10 row(s) returned  0.000 sec / 0.000 sec
7  23:00:20  select rc.RecipeClassID, RecipeClassDescription  , r.RecipeTitle from recipe_classes rc left outer join...  16 row(s) returned  0.000 sec / 0.000 sec
```

**Question: What products have never been ordered?**

Translation: Select all the products that are never ordered

Cleanup: Select products from products table where productnumber from order_details table is equal to null after doing left join on products table.

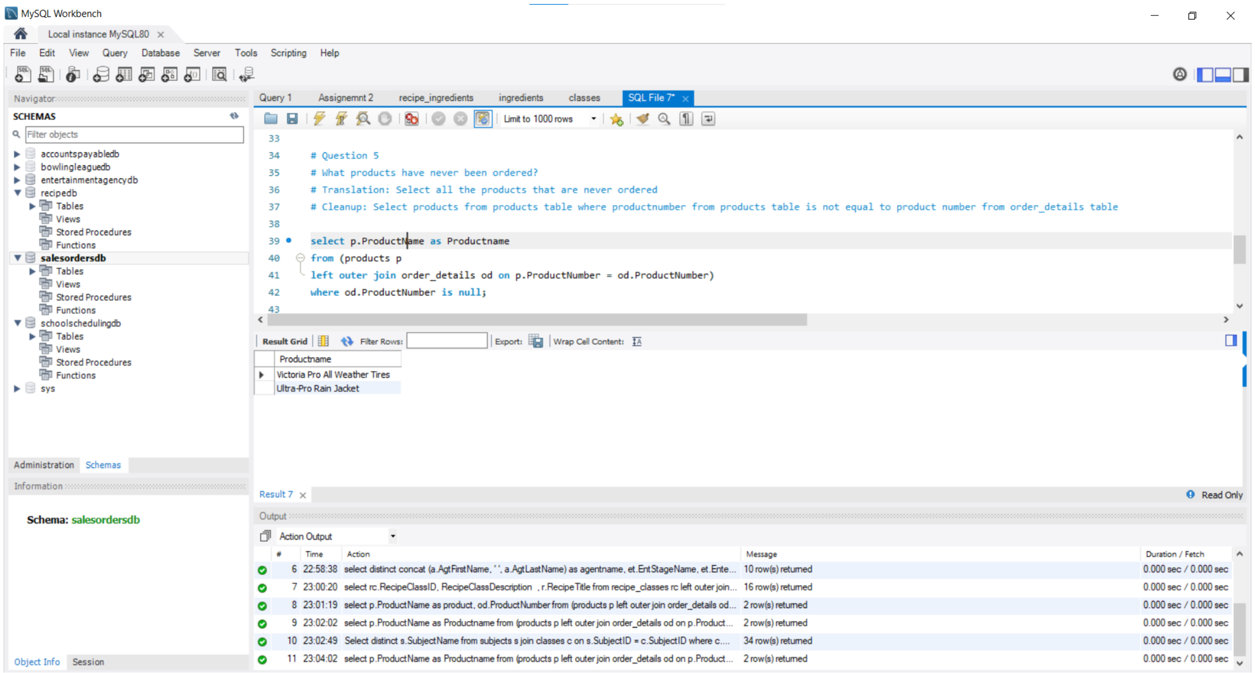
Query:

select p.ProductName as Productname

from (products p

left outer join order_details od on p.ProductNumber = od.ProductNumber)

where od.ProductNumber is null;



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# Question 5
# What products have never been ordered?
# Translation: Select all the products that are never ordered
# Cleanup: Select products from products table where productnumber from products table is not equal to product number from order_details table

select p.ProductName as Productname
from (products p
left outer join order_details od on p.ProductNumber = od.ProductNumber)
where od.ProductNumber is null;
```

| Productname |
|---|
| Victoria Pro All Weather Tires |
| Ultra-Pro Rain Jacket |

| # | Time | Action | Message | Duration / Fetch |
|---|---|---|---|---|
| 6 | 22:58:38 | select distinct concat (a.AgtFirstName, ' ', a.AgtLastName) as agentname, et.EntStageName, et.Ente... | 10 row(s) returned | 0.000 sec / 0.000 sec |
| 7 | 23:00:20 | select rc.RecipeClassID, RecipeClassDescription , r.RecipeTitle from recipe_classes rc left outer join... | 16 row(s) returned | 0.000 sec / 0.000 sec |
| 8 | 23:01:19 | select p.ProductName as product, od.ProductNumber from (products p left outer join order_details od... | 2 row(s) returned | 0.000 sec / 0.000 sec |
| 9 | 23:02:02 | select p.ProductName as Productname from (products p left outer join order_details od on p.Product... | 2 row(s) returned | 0.000 sec / 0.000 sec |
| 10 | 23:02:49 | Select distinct s.SubjectName from subjects s join classes c on s.SubjectID = c.SubjectID where c.... | 34 row(s) returned | 0.000 sec / 0.000 sec |
| 11 | 23:04:02 | select p.ProductName as Productname from (products p left outer join order_details od on p.Product... | 2 row(s) returned | 0.000 sec / 0.000 sec |

**Question: List the subjects taught on Wednesday.**

Translation: Select all the subjects that are taught on wednesday

Cleanup: Select subjectname from subjects where wednesdayschedule is equal to 1 from classes table

Query:

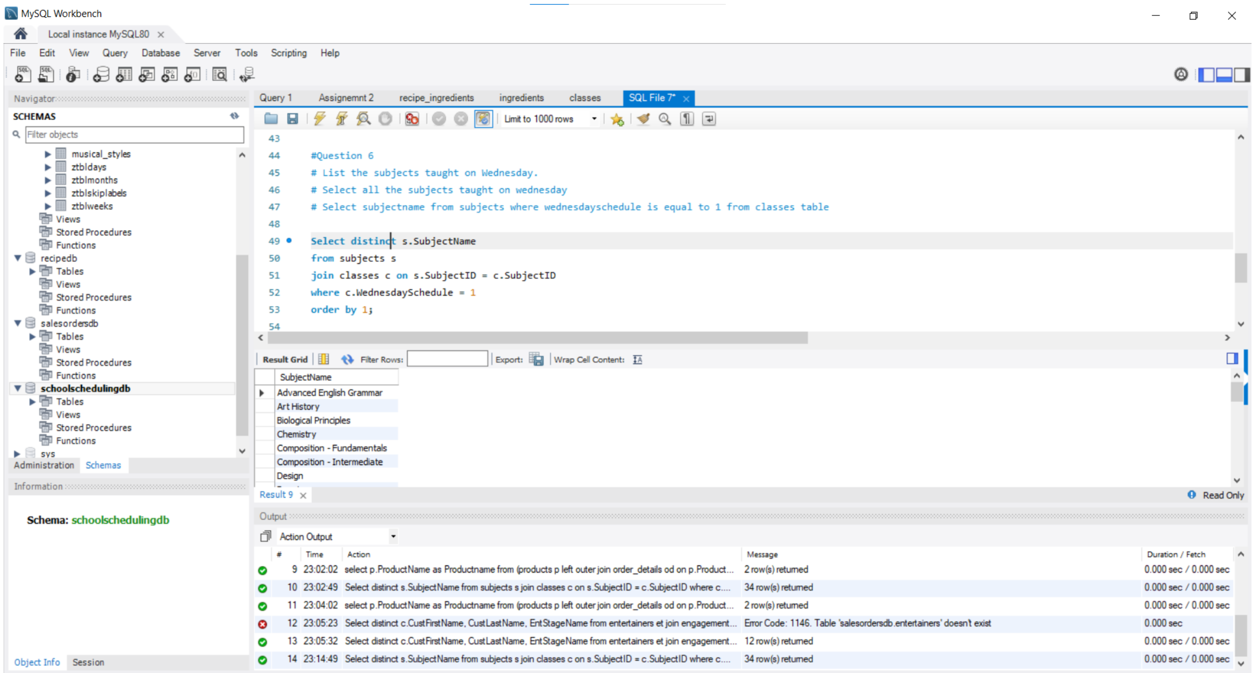
Select distinct s.SubjectName

from subjects s

join classes c on s.SubjectID = c.SubjectID

where c.WednesdaySchedule = 1

order by 1;



Schema: schoolschedulingdb

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#Question 6
# List the subjects taught on Wednesday.
# Select all the subjects taught on wednesday
# Select subjectname from subjects where wednesdayschedule is equal to 1 from classes table

Select distinct s.SubjectName
from subjects s
join classes c on s.SubjectID = c.SubjectID
where c.WednesdaySchedule = 1
order by 1;
```

| SubjectName |
|---|
| Advanced English Grammar |
| Art History |
| Biological Principles |
| Chemistry |
| Composition - Fundamentals |
| Composition - Intermediate |
| Design |

```
#   Time      Action                                                                                   Message                                                           Duration / Fetch
9   23:02:02  select p.ProductName as Productname from (products p left outer join order_details od on p.Product...   2 row(s) returned                                                  0.000 sec / 0.000 sec
10  23:02:49  Select distinct s.SubjectName from subjects s join classes c on s.SubjectID = c.SubjectID where c....   34 row(s) returned                                                 0.000 sec / 0.000 sec
11  23:04:02  select p.ProductName as Productname from (products p left outer join order_details od on p.Product...   2 row(s) returned                                                  0.000 sec / 0.000 sec
12  23:05:23  Select distinct c.CustFirstName, CustLastName, EntStageName from entertainers et join engagement...   Error Code: 1146. Table 'salesordersdb.entertainers' doesn't exist   0.000 sec
13  23:05:32  Select distinct c.CustFirstName, CustLastName, EntStageName from entertainers et join engagement...   12 row(s) returned                                                 0.000 sec / 0.000 sec
14  23:14:49  Select distinct s.SubjectName from subjects s join classes c on s.SubjectID = c.SubjectID where c....   34 row(s) returned                                                 0.000 sec / 0.000 sec
```

**Question: Find the entertainers who played engagements for customers Berg or Hallmark**

Translation: Select all entertainers who played engagements for customers Berg or Hallmark

Cleanup: Select EntStageName from entertainers who played engagements for customers Berg or Hallmark from customers table.

Query:

Select distinct c.CustFirstName, CustLastName, EntStageName

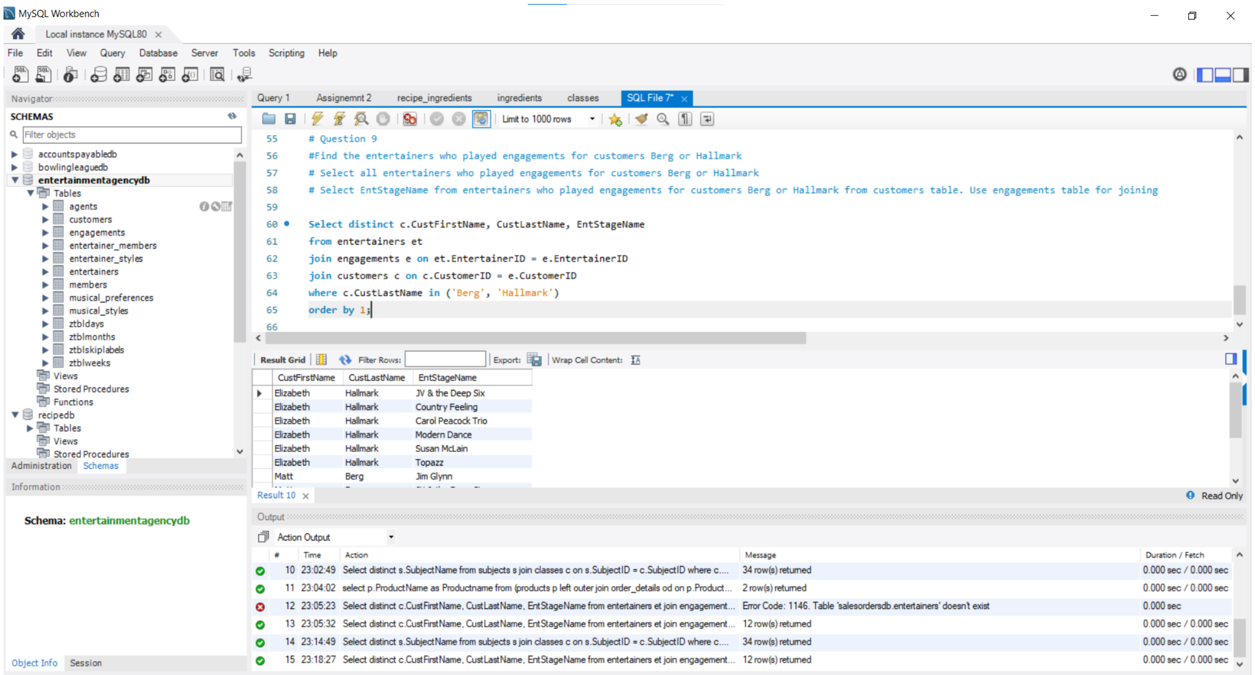
from entertainers et

join engagements e on et.EntertainerID = e.EntertainerID

join customers c on c.CustomerID = e.CustomerID

where c.CustLastName in ('Berg', 'Hallmark')

order by 1;



```
# Question 9
#Find the entertainers who played engagements for customers Berg or Hallmark
# Select all entertainers who played engagements for customers Berg or Hallmark
# Select EntStageName from entertainers who played engagements for customers Berg or Hallmark from customers table. Use engagements table for joining

Select distinct c.CustFirstName, CustLastName, EntStageName
from entertainers et
join engagements e on et.EntertainerID = e.EntertainerID
join customers c on c.CustomerID = e.CustomerID
where c.CustLastName in ('Berg', 'Hallmark')
order by 1;
```

| CustFirstName | CustLastName | EntStageName |
|---|---|---|
| Elizabeth | Hallmark | JV & the Deep Six |
| Elizabeth | Hallmark | Country Feeling |
| Elizabeth | Hallmark | Carol Peacock Trio |
| Elizabeth | Hallmark | Modern Dance |
| Elizabeth | Hallmark | Susan McLain |
| Elizabeth | Hallmark | Topazz |
| Matt | Berg | Jim Glynn |

|  | # | Time | Action | Message | Duration / Fetch |
|---|---|---|---|---|---|
| ✓ | 10 | 23:02:49 | Select distinct s.SubjectName from subjects s join classes c on s.SubjectID = c.SubjectID where c.... | 34 row(s) returned | 0.000 sec / 0.000 sec |
| ✓ | 11 | 23:04:02 | select p.ProductName as Productname from (products p left outer join order_details od on p.Product... | 2 row(s) returned | 0.000 sec / 0.000 sec |
| ☒ | 12 | 23:05:23 | Select distinct c.CustFirstName, CustLastName, EntStageName from entertainers et join engagement... | Error Code: 1146. Table 'salesordersdb.entertainers' doesn't exist | 0.000 sec |
| ✓ | 13 | 23:05:32 | Select distinct c.CustFirstName, CustLastName, EntStageName from entertainers et join engagement... | 12 row(s) returned | 0.000 sec / 0.000 sec |
| ✓ | 14 | 23:14:49 | Select distinct s.SubjectName from subjects s join classes c on s.SubjectID = c.SubjectID where c.... | 34 row(s) returned | 0.000 sec / 0.000 sec |
| ✓ | 15 | 23:18:27 | Select distinct c.CustFirstName, CustLastName, EntStageName from entertainers et join engagement... | 12 row(s) returned | 0.000 sec / 0.000 sec |