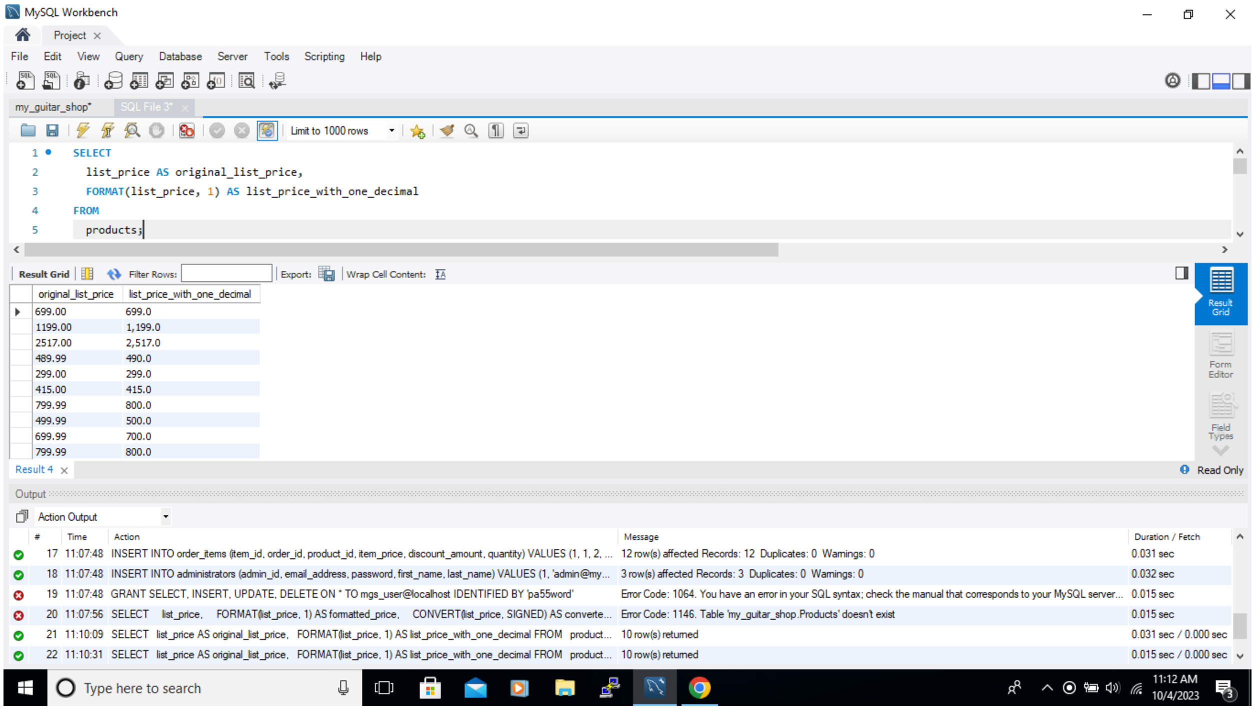
Lab 8: How to work with Data Types

Step 1:

Write a SELECT statement that returns these columns from the Products table: The list_price column A column that uses the FORMAT function to return the list_price column with 1 digit to the right of the decimal point:

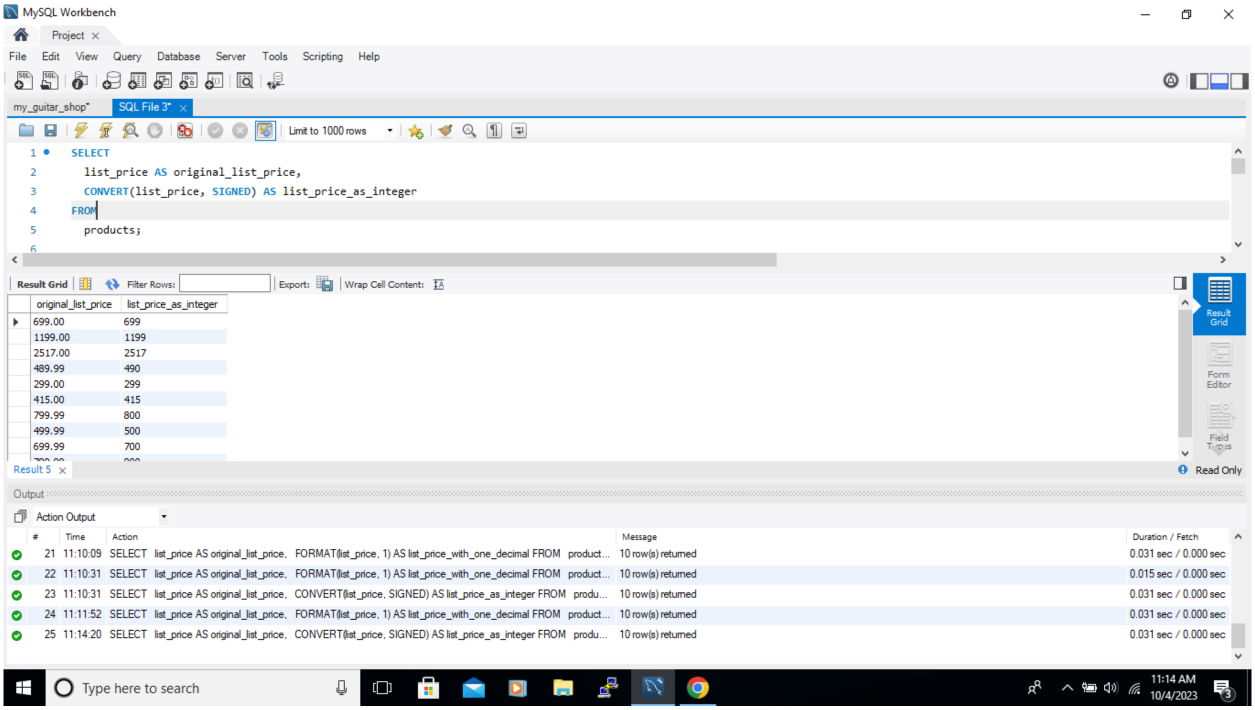


```
SELECT
  list_price AS original_list_price,
  FORMAT(list_price, 1) AS list_price_with_one_decimal
FROM
  products;
```

original_list_price	list_price_with_one_decimal
699.00	699.0
1199.00	1,199.0
2517.00	2,517.0
489.99	490.0
299.00	299.0
415.00	415.0
799.99	800.0
499.99	500.0
699.99	700.0
799.99	800.0

```
#   Time      Action                                                                                               Message                                                                                    Duration / Fetch
17  11:07:48  INSERT INTO order_items (item_id, order_id, product_id, item_price, discount_amount, quantity) VALUES (1, 1, 2, ...  12 row(s) affected Records: 12  Duplicates: 0  Warnings: 0    0.031 sec
18  11:07:48  INSERT INTO administrators (admin_id, email_address, password, first_name, last_name) VALUES (1, 'admin@my...  3 row(s) affected Records: 3  Duplicates: 0  Warnings: 0    0.032 sec
19  11:07:48  GRANT SELECT, INSERT, UPDATE, DELETE ON * TO mgs_user@localhost IDENTIFIED BY 'pa55word'    Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL server...    0.015 sec
20  11:07:56  SELECT   list_price,   FORMAT(list_price, 1) AS formatted_price,   CONVERT(list_price, SIGNED) AS converte...  Error Code: 1146. Table 'my_guitar_shop.Products' doesn't exist    0.015 sec
21  11:10:09  SELECT   list_price AS original_list_price,   FORMAT(list_price, 1) AS list_price_with_one_decimal FROM   product...  10 row(s) returned    0.031 sec / 0.000 sec
22  11:10:31  SELECT   list_price AS original_list_price,   FORMAT(list_price, 1) AS list_price_with_one_decimal FROM   product...  10 row(s) returned    0.015 sec / 0.000 sec
```

A column that uses the CONVERT function to return the list_price column as an integer:

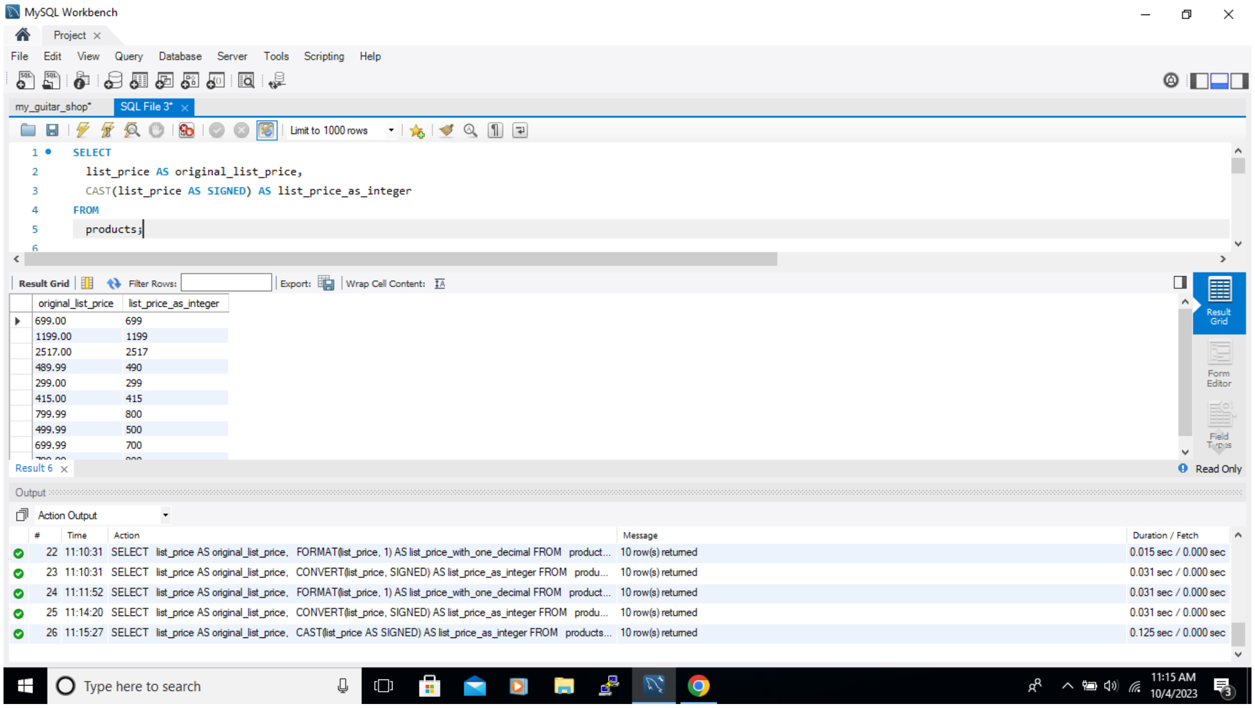


```
SELECT
   list_price AS original_list_price,
   CONVERT(list_price, SIGNED) AS list_price_as_integer
FROM
   products;
```

original_list_price	list_price_as_integer
699.00	699
1199.00	1199
2517.00	2517
489.99	490
299.00	299
415.00	415
799.99	800
499.99	500
699.99	700

#	Time	Action	Message	Duration / Fetch
21	11:10:09	SELECT list_price AS original_list_price, FORMAT(list_price, 1) AS list_price_with_one_decimal FROM product...	10 row(s) returned	0.031 sec / 0.000 sec
22	11:10:31	SELECT list_price AS original_list_price, FORMAT(list_price, 1) AS list_price_with_one_decimal FROM product...	10 row(s) returned	0.015 sec / 0.000 sec
23	11:10:31	SELECT list_price AS original_list_price, CONVERT(list_price, SIGNED) AS list_price_as_integer FROM produ...	10 row(s) returned	0.031 sec / 0.000 sec
24	11:11:52	SELECT list_price AS original_list_price, FORMAT(list_price, 1) AS list_price_with_one_decimal FROM product...	10 row(s) returned	0.031 sec / 0.000 sec
25	11:14:20	SELECT list_price AS original_list_price, CONVERT(list_price, SIGNED) AS list_price_as_integer FROM produ...	10 row(s) returned	0.031 sec / 0.000 sec

A column that uses the CAST function to return the list_price column as an integer:



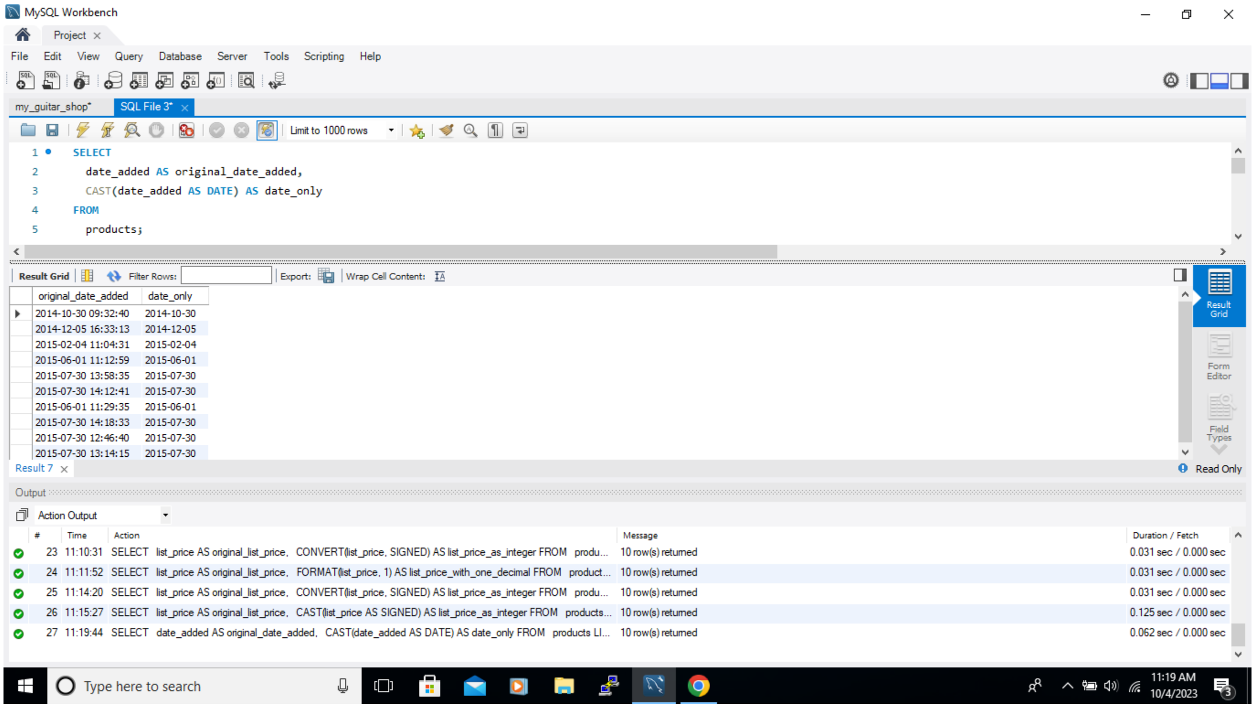
```
SELECT
   list_price AS original_list_price,
   CAST(list_price AS SIGNED) AS list_price_as_integer
FROM
   products;
```

original_list_price	list_price_as_integer
699.00	699
1199.00	1199
2517.00	2517
489.99	490
299.00	299
415.00	415
799.99	800
499.99	500
699.99	700

#	Time	Action	Message	Duration / Fetch
22	11:10:31	SELECT list_price AS original_list_price, FORMAT(list_price, 1) AS list_price_with_one_decimal FROM product...	10 row(s) returned	0.015 sec / 0.000 sec
23	11:10:31	SELECT list_price AS original_list_price, CONVERT(list_price, SIGNED) AS list_price_as_integer FROM produ...	10 row(s) returned	0.031 sec / 0.000 sec
24	11:11:52	SELECT list_price AS original_list_price, FORMAT(list_price, 1) AS list_price_with_one_decimal FROM product...	10 row(s) returned	0.031 sec / 0.000 sec
25	11:14:20	SELECT list_price AS original_list_price, CONVERT(list_price, SIGNED) AS list_price_as_integer FROM produ...	10 row(s) returned	0.031 sec / 0.000 sec
26	11:15:27	SELECT list_price AS original_list_price, CAST(list_price AS SIGNED) AS list_price_as_integer FROM products...	10 row(s) returned	0.125 sec / 0.000 sec

Step 2:

Write a SELECT statement that returns these columns from the Products table:The date_added column. A column that uses the CAST function to return the date_added column with its date only (year, month, and day):

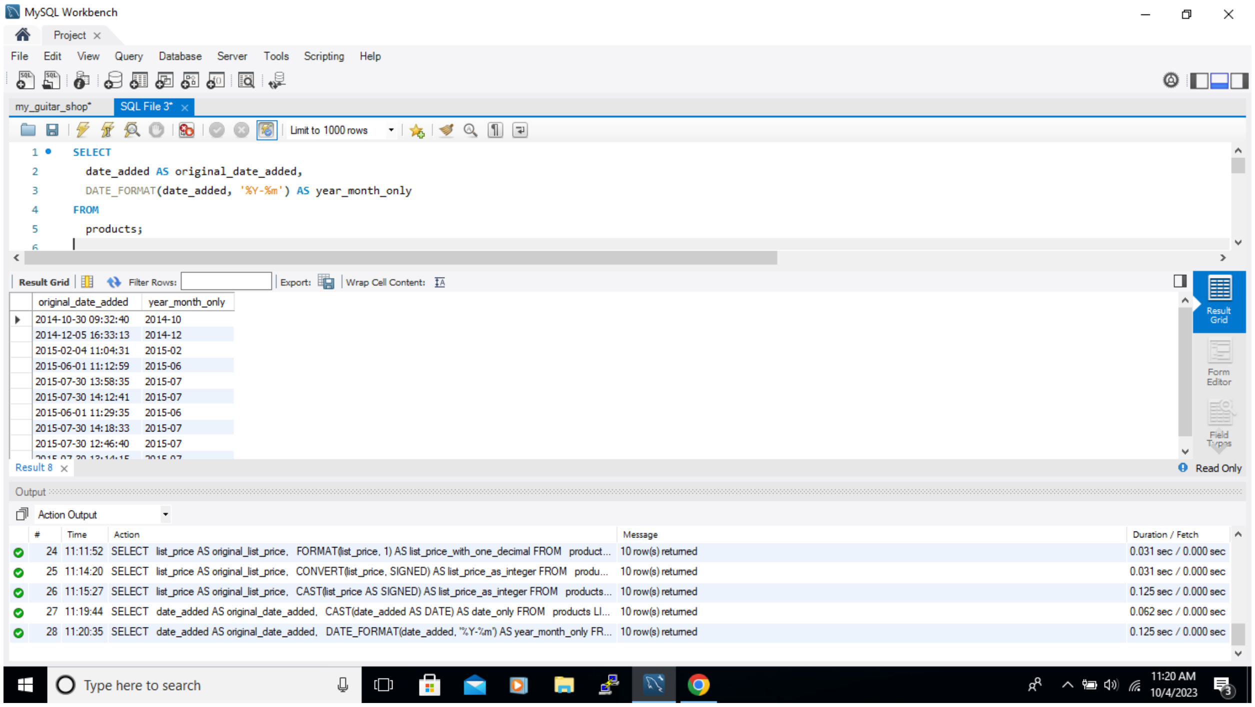


```
SELECT
  date_added AS original_date_added,
  CAST(date_added AS DATE) AS date_only
FROM
  products;
```

original_date_added	date_only
2014-10-30 09:32:40	2014-10-30
2014-12-05 16:33:13	2014-12-05
2015-02-04 11:04:31	2015-02-04
2015-06-01 11:12:59	2015-06-01
2015-07-30 13:58:35	2015-07-30
2015-07-30 14:12:41	2015-07-30
2015-06-01 11:29:35	2015-06-01
2015-07-30 14:18:33	2015-07-30
2015-07-30 12:46:40	2015-07-30
2015-07-30 13:14:15	2015-07-30

```
#   Time      Action                                                                                          Message              Duration / Fetch
23  11:10:31  SELECT  list_price AS original_list_price,  CONVERT(list_price, SIGNED) AS list_price_as_integer FROM  produ...   10 row(s) returned   0.031 sec / 0.000 sec
24  11:11:52  SELECT  list_price AS original_list_price,  FORMAT(list_price, 1) AS list_price_with_one_decimal FROM  product...  10 row(s) returned   0.031 sec / 0.000 sec
25  11:14:20  SELECT  list_price AS original_list_price,  CONVERT(list_price, SIGNED) AS list_price_as_integer FROM  produ...   10 row(s) returned   0.031 sec / 0.000 sec
26  11:15:27  SELECT  list_price AS original_list_price,  CAST(list_price AS SIGNED) AS list_price_as_integer FROM  products...  10 row(s) returned   0.125 sec / 0.000 sec
27  11:19:44  SELECT  date_added AS original_date_added,  CAST(date_added AS DATE) AS date_only FROM  products LI...             10 row(s) returned   0.062 sec / 0.000 sec
```

A column that uses the CAST function to return the date_added column with just the year and the month:

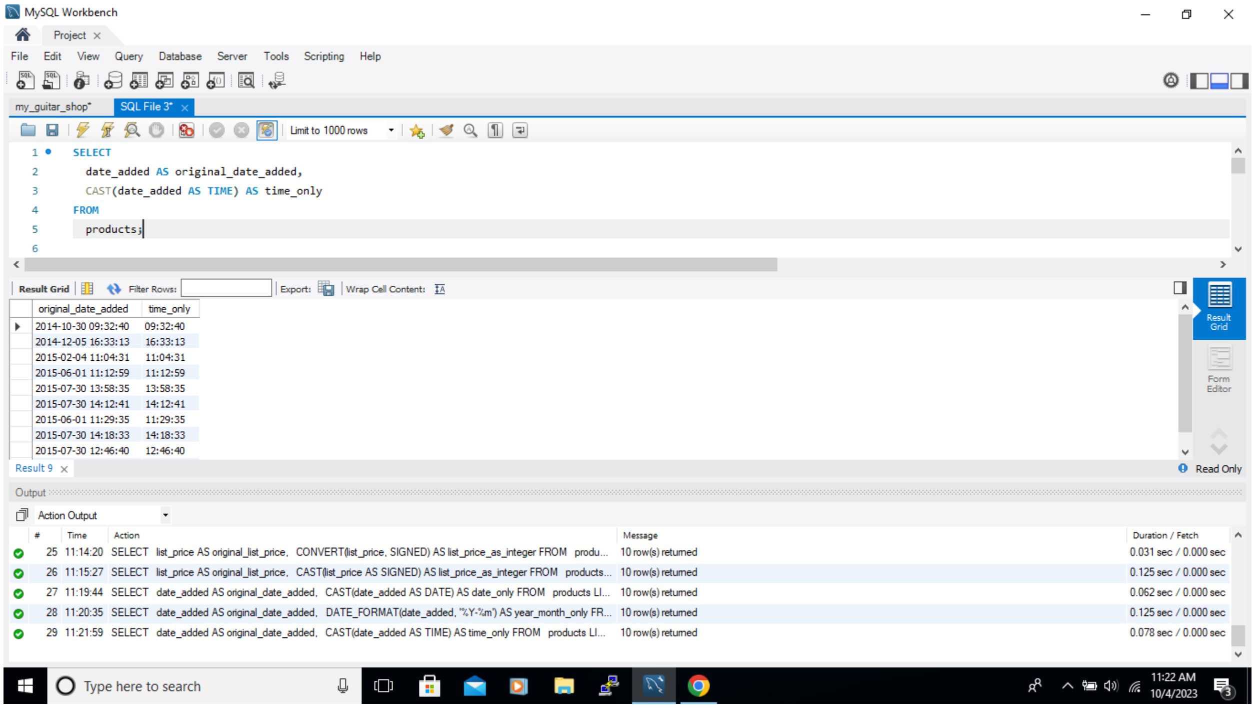


```
SELECT
  date_added AS original_date_added,
  DATE_FORMAT(date_added, '%Y-%m') AS year_month_only
FROM
  products;
```

original_date_added	year_month_only
2014-10-30 09:32:40	2014-10
2014-12-05 16:33:13	2014-12
2015-02-04 11:04:31	2015-02
2015-06-01 11:12:59	2015-06
2015-07-30 13:58:35	2015-07
2015-07-30 14:12:41	2015-07
2015-06-01 11:29:35	2015-06
2015-07-30 14:18:33	2015-07
2015-07-30 12:46:40	2015-07
2015-07-30 13:14:15	2015-07

```
#   Time      Action                                                                                          Message              Duration / Fetch
24  11:11:52  SELECT list_price AS original_list_price, FORMAT(list_price, 1) AS list_price_with_one_decimal FROM product...  10 row(s) returned  0.031 sec / 0.000 sec
25  11:14:20  SELECT list_price AS original_list_price, CONVERT(list_price, SIGNED) AS list_price_as_integer FROM produ...  10 row(s) returned  0.031 sec / 0.000 sec
26  11:15:27  SELECT list_price AS original_list_price, CAST(list_price AS SIGNED) AS list_price_as_integer FROM products...  10 row(s) returned  0.125 sec / 0.000 sec
27  11:19:44  SELECT date_added AS original_date_added, CAST(date_added AS DATE) AS date_only FROM products LI...  10 row(s) returned  0.062 sec / 0.000 sec
28  11:20:35  SELECT date_added AS original_date_added, DATE_FORMAT(date_added, '%Y-%m') AS year_month_only FR...  10 row(s) returned  0.125 sec / 0.000 sec
```

A column that uses the CAST function to return the date_added column with its full time only (hour, minutes, and seconds):



```
SELECT
  date_added AS original_date_added,
  CAST(date_added AS TIME) AS time_only
FROM
  products;
```

original_date_added	time_only
2014-10-30 09:32:40	09:32:40
2014-12-05 16:33:13	16:33:13
2015-02-04 11:04:31	11:04:31
2015-06-01 11:12:59	11:12:59
2015-07-30 13:58:35	13:58:35
2015-07-30 14:12:41	14:12:41
2015-06-01 11:29:35	11:29:35
2015-07-30 14:18:33	14:18:33
2015-07-30 12:46:40	12:46:40

```
#   Time      Action                                                                                          Message              Duration / Fetch
25  11:14:20  SELECT list_price AS original_list_price, CONVERT(list_price, SIGNED) AS list_price_as_integer FROM produ...  10 row(s) returned  0.031 sec / 0.000 sec
26  11:15:27  SELECT list_price AS original_list_price, CAST(list_price AS SIGNED) AS list_price_as_integer FROM products...  10 row(s) returned  0.125 sec / 0.000 sec
27  11:19:44  SELECT date_added AS original_date_added, CAST(date_added AS DATE) AS date_only FROM products LI...  10 row(s) returned  0.062 sec / 0.000 sec
28  11:20:35  SELECT date_added AS original_date_added, DATE_FORMAT(date_added, '%Y-%m') AS year_month_only FR...  10 row(s) returned  0.125 sec / 0.000 sec
29  11:21:59  SELECT date_added AS original_date_added, CAST(date_added AS TIME) AS time_only FROM products LI...  10 row(s) returned  0.078 sec / 0.000 sec
```