

INFORME TÉCNICO. GA3-220501113-AA3-EV01

**PRESENTADO POR:
GRUPO NUMERO 3**

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**PROGRAMA:
PROGRAMACIÓN DE APLICACIONES PARA DISPOSITIVOS MÓVILES
(2977832)**

**SERVICIO NACIONAL DE APRENDIZAJE SENA
2024**

Aquí se ha creado la base de datos, y luego utilizamos **show database** para asegurarnos que se había creado.

```
mysql> create database cdr;
Query OK, 1 row affected (0.00 sec)

mysql> show database;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'database' at line 1
mysql> show databases;
+-----+
| Database |
+-----+
| blogs    |
| cdr      |
| information_schema |
| mysql    |
| performance_schema |
| sys      |
+-----+
6 rows in set (0.00 sec)
```

luego usando el comando **use cdr**, ingresamos a la base de datos creada y creamos una tabla que luego verificamos con **show tables**.

```
[mysql> use cdr;
Database changed
mysql> CREATE TABLE `cdr` (
  ->   `id` int(10) UNSIGNED NOT NULL,
  ->   `registro` datetime NOT NULL DEFAULT '1000-01-01 00:00:00',
  ->   `origen` varchar(80) CHARACTER SET utf8 COLLATE utf8_bin NOT NULL DEFAULT ''
LT ''
  ->   `destino` varchar(80) CHARACTER SET utf8 COLLATE utf8_bin NOT NULL DEFAULT ''
ULT ''
  ->   `duracion` int(11) UNSIGNED NOT NULL DEFAULT 0,
  ->   `facturar` int(11) UNSIGNED NOT NULL DEFAULT 0,
  ->   `estado` varchar(45) CHARACTER SET utf8 COLLATE utf8_bin NOT NULL DEFAULT ''
LT ''
  -> ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_unicode_ci;
Query OK, 0 rows affected, 9 warnings (0.01 sec)

mysql> show tables;
+-----+
| Tables_in_cdr |
+-----+
| cdr            |
+-----+
```

En esta sesión empezamos a realizar las consultas en la base de datos insertada.

Consulta 1 Construya las sentencias e Inserte datos para 4 que representan 4 llamadas telefónicas.

```
INSERT INTO `cdr` (`id`, `registro`, `origen`, `destino`, `duracion`, `facturar`, `estado`) VALUES
-> (497020, '2020-12-12 09:15:00', '101', '102', 120, 30, 'ANSWERED'),
-> (497021, '2020-12-12 09:45:00', '103', '104', 300, 75, 'ANSWERED'),
-> (497022, '2020-12-12 10:00:00', '105', '106', 45, 15, 'NO ANSWER'),
-> (497023, '2020-12-12 10:30:00', '107', '108', 90, 45, 'BUSY');

mysql> INSERT INTO `cdr` (`id`, `registro`, `origen`, `destino`, `duracion`, `facturar`, `estado`) VALUES
-> (497020, '2020-12-12 09:15:00', '101', '102', 120, 30, 'ANSWERED'),
-> (497021, '2020-12-12 09:45:00', '103', '104', 300, 75, 'ANSWERED'),
-> (497022, '2020-12-12 10:00:00', '105', '106', 45, 15, 'NO ANSWER'),
-> (497023, '2020-12-12 10:30:00', '107', '108', 90, 45, 'BUSY');
Query OK, 4 rows affected (0.01 sec)
Records: 4 Duplicates: 0 Warnings: 0

mysql>
```

Consulta 2 Construya las sentencias que actualicen los datos que acaba de insertar.

```
UPDATE `cdr` SET `duracion` = 150, `facturar` = 140 WHERE `id` = 497006;
UPDATE `cdr` SET `duracion` = 90, `facturar` = 85 WHERE `id` = 497007;
UPDATE `cdr` SET `duracion` = 75, `facturar` = 70 WHERE `id` = 497008;
UPDATE `cdr` SET `duracion` = 100, `facturar` = 95 WHERE `id` = 497009;

mysql> UPDATE `cdr` SET `duracion` = 150, `facturar` = 50 WHERE `id` = 497020;
Query OK, 1 row affected (0.09 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE `cdr` SET `duracion` = 350, `facturar` = 85 WHERE `id` = 497021;
Query OK, 1 row affected (0.08 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE `cdr` SET `estado` = 'ANSWERED', `facturar` = 20 WHERE `id` = 497022;
Query OK, 1 row affected (0.07 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE `cdr` SET `estado` = 'ANSWERED', `facturar` = 60 WHERE `id` = 497023;
Query OK, 1 row affected (0.08 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql>
```

Consulta 3 Construya la sentencia en la que borre los datos de llamadas del día 12 de diciembre de 2019.

```
DELETE FROM `cdr` WHERE DATE(`registro`) = '2019-12-12';

mysql> DELETE FROM `cdr` WHERE DATE(`registro`) = '2019-12-12';
Query OK, 554 rows affected (0.12 sec)

mysql>
```

Consulta 4 . Construya la sentencia que saque un reporte de todas las llamadas entre extensiones del día 10 de marzo de 2018 usando la función DATE, que fueron atendidas

```
SELECT * FROM `cdr`
WHERE DATE(`registro`) = '2018-03-10'
AND `estado` = 'ANSWERED';
```

```
mysql> SELECT * FROM `cdr`
-> WHERE DATE(`registro`) = '2018-03-10'
-> AND `estado` = 'ANSWERED';
```

id	registro	origen	destino	duracion	facturar	estado
228331	2018-03-10 06:51:38	3126872344	444	142	142	ANSWERED
228332	2018-03-10 06:59:59	28331152	125	161	139	ANSWERED
228333	2018-03-10 07:05:15	28208868	122	47	37	ANSWERED
228334	2018-03-10 07:06:02	116	125	36	26	ANSWERED
228335	2018-03-10 07:05:30	118	122	112	79	ANSWERED
228337	2018-03-10 07:09:52	103	122	79	73	ANSWERED
228338	2018-03-10 07:13:18	106	122	28	20	ANSWERED
228339	2018-03-10 07:29:02	125	116	24	19	ANSWERED
228342	2018-03-10 07:42:12	103	3155125187	424	413	ANSWERED
228343	2018-03-10 07:46:22	3116200557	444	234	234	ANSWERED
228344	2018-03-10 07:50:16	3116200557	103	88	83	ANSWERED
228345	2018-03-10 07:51:04	118	122	51	41	ANSWERED
228346	2018-03-10 07:52:06	106	101	78	73	ANSWERED
228347	2018-03-10 07:55:06	106	122	65	53	ANSWERED
228350	2018-03-10 08:26:36	123	8375825	196	196	ANSWERED
228351	2018-03-10 08:32:30	106	8312000	44	43	ANSWERED
228352	2018-03-10 08:32:14	103	122	86	55	ANSWERED
228353	2018-03-10 08:33:24	106	8312000	29	28	ANSWERED
228354	2018-03-10 08:34:02	106	8312000	55	54	ANSWERED
228356	2018-03-10 08:38:33	143	3163046615	29	6	ANSWERED
228358	2018-03-10 08:40:51	101	3108268627	0	0	ANSWERED
228359	2018-03-10 08:41:22	101	3108268624	126	104	ANSWERED
228362	2018-03-10 08:44:56	143	3163046615	60	43	ANSWERED
228363	2018-03-10 08:44:40	126	122	83	74	ANSWERED
228365	2018-03-10 08:47:59	104	3224341516	95	83	ANSWERED
228366	2018-03-10 08:46:52	24026044	600	194	95	ANSWERED
228367	2018-03-10 08:49:37	101	3108268624	36	23	ANSWERED
228368	2018-03-10 08:59:00	28331152	126	58	41	ANSWERED
228369	2018-03-10 09:00:31	103	126	70	64	ANSWERED
228370	2018-03-10 09:05:09	28372633	600	118	18	ANSWERED
228371	2018-03-10 09:10:03	106	3105455115	2	2	ANSWERED
228372	2018-03-10 09:10:17	106	8366632	37	20	ANSWERED
228374	2018-03-10 09:16:07	28331152	100	98	71	ANSWERED
228375	2018-03-10 09:17:32	28208868	123	55	26	ANSWERED
228376	2018-03-10 09:19:07	110	125	69	64	ANSWERED
228389	2018-03-10 09:28:33	28208868	121	176	92	ANSWERED
228390	2018-03-10 09:31:16	126	8232718	81	77	ANSWERED
228391	2018-03-10 09:32:49	126	8232449	66	63	ANSWERED
228392	2018-03-10 09:34:16	28208868	125	78	63	ANSWERED
228393	2018-03-10 09:38:16	104	110	36	25	ANSWERED
228394	2018-03-10 09:30:43	138	121	541	494	ANSWERED
228395	2018-03-10 09:39:30	28331152	110	114	99	ANSWERED
228397	2018-03-10 09:47:00	100	8362563	73	59	ANSWERED
228399	2018-03-10 09:48:53	100	8234634	65	49	ANSWERED
228400	2018-03-10 09:49:01	126	8218536	81	73	ANSWERED
228402	2018-03-10 09:51:13	146	3207635131	29	15	ANSWERED
228403	2018-03-10 09:51:39	138	121	143	115	ANSWERED
228404	2018-03-10 09:53:04	104	018000949191	106	101	ANSWERED
228405	2018-03-10 09:55:08	100	104	153	146	ANSWERED
228406	2018-03-10 09:52:51	3186546474	146	317	282	ANSWERED
228407	2018-03-10 09:57:49	100	8241767	60	49	ANSWERED
228408	2018-03-10 10:00:39	108	125	63	52	ANSWERED
228409	2018-03-10 10:01:53	100	8335729	82	78	ANSWERED
228412	2018-03-10 10:07:48	109	116	68	44	ANSWERED
228414	2018-03-10 10:07:13	3112416804	600	192	92	ANSWERED
228415	2018-03-10 10:11:55	100	8241767	183	174	ANSWERED
228417	2018-03-10 10:19:44	100	8244172	72	56	ANSWERED
228418	2018-03-10 10:21:10	103	100	47	44	ANSWERED
228419	2018-03-10 10:24:49	123	110	79	73	ANSWERED
228420	2018-03-10 10:30:17	138	122	107	74	ANSWERED
228421	2018-03-10 10:31:25	104	109	43	37	ANSWERED
228422	2018-03-10 10:33:01	118	8208868	572	553	ANSWERED
228423	2018-03-10 10:42:24	103	119	35	29	ANSWERED
228424	2018-03-10 10:42:43	118	123	46	40	ANSWERED
228425	2018-03-10 10:36:24	125	8368904	584	566	ANSWERED
228426	2018-03-10 10:42:59	113	3206486581	257	242	ANSWERED
228427	2018-03-10 10:45:39	103	113	99	1	ANSWERED
228428	2018-03-10 10:46:54	138	122	55	33	ANSWERED

Consulta 5 Contrata la consulta anterior pero empleando las funciones YEAR(), MONTH(), y DAY() en lugar de usar la función DATE().

```
SELECT * FROM `cdr`
WHERE YEAR(`registro`) = 2018
AND MONTH(`registro`) = 3
AND DAY(`registro`) = 10
AND `estado` = 'ANSWERED';
```

```
mysql> SELECT * FROM `cdr`
-> WHERE YEAR(`registro`) = 2018
-> AND MONTH(`registro`) = 3
-> AND DAY(`registro`) = 10
-> AND `estado` = 'ANSWERED';
```

id	registro	origen	destino	duracion	facturar	estado
228331	2018-03-10 06:51:38	3126872344	444	142	142	ANSWERED
228332	2018-03-10 06:59:59	28331152	125	161	139	ANSWERED
228333	2018-03-10 07:05:15	28208868	122	47	37	ANSWERED
228334	2018-03-10 07:06:02	116	125	36	26	ANSWERED
228335	2018-03-10 07:05:30	118	122	112	79	ANSWERED
228337	2018-03-10 07:09:52	103	122	79	73	ANSWERED
228338	2018-03-10 07:13:18	106	122	28	20	ANSWERED
228339	2018-03-10 07:29:02	125	116	24	19	ANSWERED
228342	2018-03-10 07:42:12	103	3155125187	424	413	ANSWERED
228343	2018-03-10 07:46:22	3116200557	444	234	234	ANSWERED
228344	2018-03-10 07:50:16	3116200557	103	88	83	ANSWERED
228345	2018-03-10 07:51:04	118	122	51	41	ANSWERED
228346	2018-03-10 07:52:06	106	101	78	73	ANSWERED
228347	2018-03-10 07:55:06	106	122	65	53	ANSWERED
228350	2018-03-10 08:26:36	123	8375825	196	196	ANSWERED
228351	2018-03-10 08:32:30	106	8312000	44	43	ANSWERED
228352	2018-03-10 08:32:14	103	122	86	55	ANSWERED
228353	2018-03-10 08:33:24	106	8312000	29	28	ANSWERED
228354	2018-03-10 08:34:02	106	8312000	55	54	ANSWERED
228356	2018-03-10 08:38:33	143	3163046615	29	6	ANSWERED
228358	2018-03-10 08:40:51	101	3108268627	0	0	ANSWERED
228359	2018-03-10 08:41:22	101	3108268624	126	104	ANSWERED
228362	2018-03-10 08:44:56	143	3163046615	60	43	ANSWERED
228363	2018-03-10 08:44:40	126	122	83	74	ANSWERED
228365	2018-03-10 08:47:59	104	3224341516	95	83	ANSWERED
228366	2018-03-10 08:46:52	24026044	600	194	95	ANSWERED
228367	2018-03-10 08:49:37	101	3108268624	36	23	ANSWERED
228368	2018-03-10 08:59:00	28331152	126	58	41	ANSWERED
228369	2018-03-10 09:00:31	103	126	70	64	ANSWERED
228370	2018-03-10 09:05:09	28372633	600	118	18	ANSWERED
228371	2018-03-10 09:10:03	106	3105455115	2	2	ANSWERED
228372	2018-03-10 09:10:17	106	8366632	37	20	ANSWERED
228374	2018-03-10 09:16:07	28331152	100	98	71	ANSWERED
228375	2018-03-10 09:17:32	28208868	123	55	26	ANSWERED
228376	2018-03-10 09:19:07	110	125	69	64	ANSWERED
228389	2018-03-10 09:28:33	28208868	121	176	92	ANSWERED
228390	2018-03-10 09:31:16	126	8232718	81	77	ANSWERED
228391	2018-03-10 09:32:49	126	8232449	66	63	ANSWERED
228392	2018-03-10 09:34:16	28208868	125	78	63	ANSWERED
228393	2018-03-10 09:38:16	104	110	36	25	ANSWERED
228394	2018-03-10 09:30:43	138	121	541	494	ANSWERED
228395	2018-03-10 09:39:30	28331152	110	114	99	ANSWERED
228397	2018-03-10 09:47:00	100	8362563	73	59	ANSWERED
228399	2018-03-10 09:48:53	100	8234634	65	49	ANSWERED
228400	2018-03-10 09:49:01	126	8218536	81	73	ANSWERED
228402	2018-03-10 09:51:13	146	3207635131	29	15	ANSWERED
228403	2018-03-10 09:51:39	138	121	143	115	ANSWERED
228404	2018-03-10 09:53:04	104	018000949191	106	101	ANSWERED
228405	2018-03-10 09:55:08	100	104	153	146	ANSWERED
228406	2018-03-10 09:52:51	3186546474	146	317	282	ANSWERED
228407	2018-03-10 09:57:49	100	8241767	60	49	ANSWERED
228408	2018-03-10 10:00:39	108	125	63	52	ANSWERED
228409	2018-03-10 10:01:53	100	8335729	82	78	ANSWERED
228412	2018-03-10 10:07:48	109	116	68	44	ANSWERED
228414	2018-03-10 10:07:13	3112416804	600	192	92	ANSWERED
228415	2018-03-10 10:11:55	100	8241767	183	174	ANSWERED
228417	2018-03-10 10:19:44	100	8244172	72	56	ANSWERED
228418	2018-03-10 10:21:10	103	100	47	44	ANSWERED
228419	2018-03-10 10:24:49	123	110	79	73	ANSWERED
228420	2018-03-10 10:30:17	138	122	107	74	ANSWERED
228421	2018-03-10 10:31:25	104	109	43	37	ANSWERED
228422	2018-03-10 10:33:01	118	8208868	572	553	ANSWERED
228423	2018-03-10 10:42:24	103	119	35	29	ANSWERED
228424	2018-03-10 10:42:43	118	123	46	40	ANSWERED
228425	2018-03-10 10:36:24	125	8368904	584	566	ANSWERED
228426	2018-03-10 10:42:59	113	3206486581	257	242	ANSWERED
228427	2018-03-10 10:45:39	103	113	99	1	ANSWERED
228428	2018-03-10 10:46:54	138	122	55	33	ANSWERED
228431	2018-03-10 10:48:28	126	8208868	66	55	ANSWERED
228432	2018-03-10 10:49:43	28331152	125	22	11	ANSWERED
228434	2018-03-10 10:48:10	103	113	151	147	ANSWERED

Consulta 6 Elabore una consulta de las llamadas entrantes no atendidas entre el mediodía del 12 de enero de 2017 y la media noche del 3 de marzo de 2017.

```
SELECT * FROM `cdr`
```

```
WHERE `estado` != 'ANSWERED'
```

```
AND `registro` BETWEEN '2017-01-12 12:00:00' AND '2017-03-03 23:59:59';
```

```
mysql> SELECT * FROM `cdr`
```

```
-> WHERE `estado` != 'ANSWERED'
```

```
-> AND `registro` BETWEEN '2017-01-12 12:00:00' AND '2017-03-03 23:59:59';
```

id	registro	origen	destino	duracion	facturar	estado
112413	2017-01-12 12:29:50	108	125	63	0	NO ANSWER
112418	2017-01-12 13:48:45	103	113	95	0	NO ANSWER
112420	2017-01-12 14:06:34	122	110	58	0	NO ANSWER
112423	2017-01-12 14:14:49	28208868	110	93	93	NO ANSWER
112427	2017-01-12 14:26:38	115	119	1	0	NO ANSWER
112438	2017-01-12 14:36:34	28208868	110	50	50	NO ANSWER
112439	2017-01-12 14:37:19	28208868	104	34	34	NO ANSWER
112443	2017-01-12 14:39:58	3127398200	101	201	201	NO ANSWER
112446	2017-01-12 14:47:37	104	113	69	0	NO ANSWER
112448	2017-01-12 14:49:48	103	113	65	0	NO ANSWER
112453	2017-01-12 14:56:26	28208868	116	53	53	NO ANSWER
112454	2017-01-12 14:57:16	28208868	126	65	65	NO ANSWER
112456	2017-01-12 14:54:45	28222032	101	229	229	NO ANSWER
112457	2017-01-12 14:58:49	28380649	101	126	126	NO ANSWER
112465	2017-01-12 15:09:17	28368623	101	442	442	BUSY
112470	2017-01-12 15:20:07	122	119	16	0	NO ANSWER
112472	2017-01-12 15:30:30	101	115	30	0	NO ANSWER
112480	2017-01-12 15:42:29	28208868	117	31	31	FAILED
112484	2017-01-12 15:42:54	28208868	101	123	123	NO ANSWER
112485	2017-01-12 15:44:51	28208868	117	31	31	FAILED
112486	2017-01-12 15:45:16	28208868	117	30	30	FAILED
112488	2017-01-12 15:45:40	28208868	117	31	31	FAILED
112490	2017-01-12 15:46:04	28208868	117	30	30	FAILED
112491	2017-01-12 15:46:27	28208868	117	31	31	FAILED
112494	2017-01-12 15:46:50	28331152	117	34	34	FAILED
112505	2017-01-12 16:03:57	104	125	17	0	NO ANSWER
112508	2017-01-12 16:09:24	124	8208868	1	0	BUSY
112511	2017-01-12 16:11:32	101	125	2	0	NO ANSWER
112521	2017-01-12 16:37:37	113	103	16	0	NO ANSWER
112523	2017-01-12 16:37:59	101	113	46	0	NO ANSWER
112525	2017-01-12 16:39:00	101	113	7	0	BUSY
112527	2017-01-12 16:45:34	101	8228032	5	0	FAILED
112528	2017-01-12 16:45:50	101	8228032	5	0	FAILED
112531	2017-01-12 16:49:15	113	125	2	0	NO ANSWER
112532	2017-01-12 16:49:20	113	117	26	0	FAILED
112534	2017-01-12 16:55:32	115	8231868	1	0	NO ANSWER
112535	2017-01-12 16:55:43	115	104	13	0	NO ANSWER
112546	2017-01-12 17:09:16	103	108	40	0	NO ANSWER
112547	2017-01-12 17:10:04	101	8228032	5	0	FAILED
112548	2017-01-12 17:09:48	3122050677	103	90	90	NO ANSWER
112553	2017-01-12 17:20:22	109	115	0	0	NO ANSWER
112557	2017-01-12 17:31:31	110	109	39	0	NO ANSWER
112563	2017-01-12 17:46:25	125	8368904	55	0	FAILED
112567	2017-01-12 19:18:56	3015234039	600	133	133	NO ANSWER
112574	2017-01-13 07:41:41	28331152	110	186	186	NO ANSWER
112575	2017-01-13 07:46:33	28235376	115	188	188	NO ANSWER
112576	2017-01-13 07:49:01	28331152	110	130	130	NO ANSWER
112577	2017-01-13 07:51:06	28331152	108	61	61	NO ANSWER
112578	2017-01-13 07:57:35	28331152	110	133	133	NO ANSWER
112580	2017-01-13 08:01:10	104	125	39	0	NO ANSWER
112584	2017-01-13 08:08:30	104	125	39	0	NO ANSWER
112592	2017-01-13 08:17:23	104	125	37	0	NO ANSWER
112595	2017-01-13 08:22:33	104	125	9	0	NO ANSWER
112598	2017-01-13 08:29:05	109	117	25	0	FAILED
112599	2017-01-13 08:29:26	101	113	53	0	NO ANSWER
112600	2017-01-13 08:30:27	101	113	17	0	NO ANSWER
112601	2017-01-13 08:30:46	104	125	34	0	NO ANSWER
112605	2017-01-13 08:34:23	101	113	30	0	NO ANSWER
112607	2017-01-13 08:35:20	104	125	69	0	NO ANSWER
112608	2017-01-13 08:36:36	101	110	0	0	NO ANSWER
112610	2017-01-13 08:37:02	101	110	46	0	NO ANSWER
112612	2017-01-13 08:37:56	101	113	45	0	NO ANSWER
112616	2017-01-13 08:49:04	115	8380200	3	0	NO ANSWER
112617	2017-01-13 08:47:21	28233203	101	120	120	NO ANSWER
112618	2017-01-13 08:48:37	104	125	47	0	NO ANSWER
112624	2017-01-13 08:59:33	101	110	14	0	NO ANSWER
112625	2017-01-13 09:00:11	104	108	28	0	NO ANSWER
112626	2017-01-13 09:01:44	101	110	16	0	NO ANSWER
112631	2017-01-13 09:10:36	104	125	4	0	NO ANSWER
112633	2017-01-13 09:11:23	104	8231111	52	0	NO ANSWER
112635	2017-01-13 09:14:39	104	125	56	0	NO ANSWER
112636	2017-01-13 09:17:51	104	125	54	0	NO ANSWER

Consulta 7 . Elabore la consulta que le permita saber cuántas llamadas entraron el día 7 de abril de 2019.

```
SELECT COUNT(*) AS num_calls
FROM `cdr`
WHERE DATE(`registro`) = '2019-04-07';
```

```
mysql> SELECT COUNT(*) AS num_calls
-> FROM `cdr`
-> WHERE DATE(`registro`) = '2019-04-07';
```

```
+-----+
| num_calls |
+-----+
|          0 |
+-----+
1 row in set (0.07 sec)
```

```
mysql> █
```

Consulta 8 Elabore una consulta que permita saber cuántas llamadas no se contestaron durante cada año entre 2016 y 2019.

```
SELECT YEAR(`registro`) AS year, COUNT(*) AS num_unanswered
FROM `cdr`
WHERE `estado` != 'ANSWERED'
AND YEAR(`registro`) BETWEEN 2016 AND 2019
GROUP BY YEAR(`registro`);
```

```
mysql> SELECT YEAR(`registro`) AS year, COUNT(*) AS num_unanswered
-> FROM `cdr`
-> WHERE `estado` != 'ANSWERED'
-> AND YEAR(`registro`) BETWEEN 2016 AND 2019
-> GROUP BY YEAR(`registro`);
```

```
+-----+-----+
| year | num_unanswered |
+-----+-----+
| 2016 |          16706 |
| 2017 |          26924 |
| 2019 |           9262 |
| 2018 |          12573 |
+-----+-----+
4 rows in set (0.09 sec)
```

```
mysql> █
```

Consulta 9 Elabore una consulta que permita saber cuánto cuestan todas las llamadas realizadas por cada una de las extensiones 111, 104, 128, 161, 151 durante el año 2019.

```
SELECT `origen`, SUM(`facturar`) AS total_cost
FROM `cdr`
WHERE YEAR(`registro`) = 2019
      AND `origen` IN ('111', '104', '128', '161', '151')
GROUP BY `origen`;
```

```
mysql> SELECT `origen`, SUM(`facturar`) AS total_cost
-> FROM `cdr`
-> WHERE YEAR(`registro`) = 2019
->   AND `origen` IN ('111', '104', '128', '161', '151')
-> GROUP BY `origen`;
```

```
+-----+-----+
| origen | total_cost |
+-----+-----+
| 104    |      42370 |
| 111    |      17645 |
+-----+-----+
2 rows in set (0.08 sec)
```

```
mysql> █
```