1. Who is the most senior employee based on job title?

Query:

select \* from employee

order by levels desc

limit 1

Output:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| employee\_id | last\_name | first\_name | title | reports\_to | levels | birthdate |
| 9 | Madan | Mohan | Senior General Manager | NULL | L7 | 1/26/1961 0:00 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| hire\_date | address | city | state | country | postal\_code | phone | fax | email |
| 1/14/2016 0:00 | 1008 Vrinda Ave MT | Edmonton | AB | Canada | T5K 2N1 | +1 (780) 428-9482 | +1 (780) 428-3457 | madan.mohan@  chinookcorp.com |

2. Which countries have the most Invoices?

Query:

select count(\*) as count\_bill,billing\_country

from invoice

group by billing\_country

order by count\_bill desc

Output:

|  |  |
| --- | --- |
| count\_bill | billing\_country |
| 131 | USA |
| 76 | Canada |
| 61 | Brazil |
| 50 | France |
| 41 | Germany |
| 30 | Czech Republic |
| 29 | Portugal |
| 28 | United Kingdom |
| 21 | India |
| 13 | Chile |
| 13 | Ireland |
| 11 | Spain |
| 11 | Finland |
| 10 | Australia |
| 10 | Netherlands |
| 10 | Sweden |
| 10 | Poland |
| 10 | Hungary |
| 10 | Denmark |
| 9 | Austria |
| 9 | Norway |
| 9 | Italy |
| 7 | Belgium |
| 5 | Argentina |

3. What are top 3 values of total invoice?

Query:

select total from invoice

order by total desc

limit 3

Output:

|  |
| --- |
| total |
| 23.76 |
| 19.8 |
| 19.8 |

4. Which city has the best customers? We would like to throw a promotional Music

Festival in the city we made the most money. Write a query that returns one city that

has the highest sum of invoice totals. Return both the city name & sum of all invoice

totals

Query:

select \* from invoice

select sum(total) as total\_sale,billing\_city from invoice

group by billing\_city

order by total\_sale desc

limit 1

Output:

|  |  |
| --- | --- |
| total\_sale | billing\_city |
| 273.24 | Prague |

5. Who is the best customer? The customer who has spent the most money will be

declared the best customer. Write a query that returns the person who has spent the

most money

Query:

select sum(i.total) as total\_spent , c.first\_name, c.last\_name

from customer as c

inner join invoice as i

on i.customer\_id=c.customer\_id

group by c.customer\_id

order by total\_spent desc

limit 1

Output:

|  |  |  |
| --- | --- | --- |
| total\_spent | first\_name | last\_name |
| 144.54 | R | Madhav |

1. Write query to return the email, first name, last name, & Genre of all Rock Music

listeners. Return your list ordered alphabetically by email starting with A

Query:

select distinct email, first\_name, last\_name from customer as c

Join invoice as i

on c.customer\_id=i.customer\_id

Join invoice\_line as il

on i.invoice\_id=il.invoice\_id

where track\_id in(

select track\_id from track

join genre on track.genre\_id=genre.genre\_id

where genre.name like 'Rock'

)

order by email;

Output:

|  |  |  |
| --- | --- | --- |
| email | first\_name | last\_name |
| aaronmitchell@yahoo.ca | Aaron | Mitchell |
| alero@uol.com.br | Alexandre | Rocha |
| astrid.gruber@apple.at | Astrid | Gruber |
| bjorn.hansen@yahoo.no | BjÃ¸rn | Hansen |
| camille.bernard@yahoo.fr | Camille | Bernard |
| daan\_peeters@apple.be | Daan | Peeters |
| diego.gutierrez@yahoo.ar | Diego | GutiÃ©rrez |
| dmiller@comcast.com | Dan | Miller |
| dominiquelefebvre@gmail.com | Dominique | Lefebvre |
| edfrancis@yachoo.ca | Edward | Francis |
| eduardo@woodstock.com.br | Eduardo | Martins |
| ellie.sullivan@shaw.ca | Ellie | Sullivan |
| emma\_jones@hotmail.com | Emma | Jones |
| enrique\_munoz@yahoo.es | Enrique | MuÃ±oz |
| fernadaramos4@uol.com.br | Fernanda | Ramos |
| fharris@google.com | Frank | Harris |
| fralston@gmail.com | Frank | Ralston |
| ftremblay@gmail.com | FranÃ§ois | Tremblay |
| fzimmermann@yahoo.de | Fynn | Zimmermann |
| hannah.schneider@yahoo.de | Hannah | Schneider |
| hholy@gmail.com | Helena | HolÃ½ |
| hleacock@gmail.com | Heather | Leacock |
| hughoreilly@apple.ie | Hugh | O'Reilly |
| isabelle\_mercier@apple.fr | Isabelle | Mercier |
| jacksmith@microsoft.com | Jack | Smith |
| jenniferp@rogers.ca | Jennifer | Peterson |
| jfernandes@yahoo.pt | JoÃ£o | Fernandes |
| joakim.johansson@yahoo.se | Joakim | Johansson |
| johavanderberg@yahoo.nl | Johannes | Van der Berg |
| johngordon22@yahoo.com | John | Gordon |
| jubarnett@gmail.com | Julia | Barnett |
| kachase@hotmail.com | Kathy | Chase |
| kara.nielsen@jubii.dk | Kara | Nielsen |
| ladislav\_kovacs@apple.hu | Ladislav | KovÃ¡cs |
| leonekohler@surfeu.de | Leonie | KÃ¶hler |
| lucas.mancini@yahoo.it | Lucas | Mancini |
| luisg@embraer.com.br | LuÃ­s | GonÃ§alves |
| luisrojas@yahoo.cl | Luis | Rojas |
| manoj.pareek@rediff.com | Manoj | Pareek |
| marc.dubois@hotmail.com | Marc | Dubois |
| mark.taylor@yahoo.au | Mark | Taylor |
| marthasilk@gmail.com | Martha | Silk |
| masampaio@sapo.pt | Madalena | Sampaio |
| michelleb@aol.com | Michelle | Brooks |
| mphilips12@shaw.ca | Mark | Philips |
| nschroder@surfeu.de | Niklas | SchrÃ¶der |
| patrick.gray@aol.com | Patrick | Gray |
| phil.hughes@gmail.com | Phil | Hughes |
| puja\_srivastava@yahoo.in | Puja | Srivastava |
| r.madhav@jetbrains.com | R | Madhav |
| ricunningham@hotmail.com | Richard | Cunningham |
| robbrown@shaw.ca | Robert | Brown |
| roberto.almeida@riotur.gov.br | Roberto | Almeida |
| stanisÅ‚aw.wÃ³jcik@wp.pl | StanisÅ‚aw | WÃ³jcik |
| steve.murray@yahoo.uk | Steve | Murray |
| terhi.hamalainen@apple.fi | Terhi | HÃ¤mÃ¤lÃ¤inen |
| tgoyer@apple.com | Tim | Goyer |
| vstevens@yahoo.com | Victor | Stevens |
| wyatt.girard@yahoo.fr | Wyatt | Girard |

2. Invite the artists who have written the most rock music in our dataset. Write a

query that returns the Artist name and total track count of the top 10 rock bands

Query:

Select ar.name, ar.artist\_id, count(ar.artist\_id) as number\_of\_songs

from artist as ar

join album as al

on ar.artist\_id=al.artist\_id

join Track as t

on al.album\_id=t.album\_id

join genre as gr

on gr.genre\_id=t.genre\_id

where gr.name like 'Rock'

group by ar.artist\_id

order by number\_of\_songs desc

limit 10;

Output:

|  |  |  |
| --- | --- | --- |
| name | artist\_id | number\_of\_songs |
| Led Zeppelin | 22 | 114 |
| U2 | 150 | 112 |
| Deep Purple | 58 | 92 |
| Iron Maiden | 90 | 81 |
| Pearl Jam | 118 | 54 |
| Van Halen | 152 | 52 |
| Queen | 51 | 45 |
| The Rolling Stones | 142 | 41 |
| Creedence Clearwater Revival | 76 | 40 |
| Kiss | 52 | 35 |

3. Return all the track names that have a song length longer than the average song length.

Return the Name and Milliseconds for each track. Order by the song length with the

longest songs listed first

Query:

select name, milliseconds as length

from track

where milliseconds> (

select avg(milliseconds) as avg\_track\_length

from track)

order by milliseconds

Output:

|  |  |
| --- | --- |
| name | length |
| Wicked Ways | 393691 |
| Concerto for Clarinet in A Major, K. 622: II. Adagio | 394482 |
| The Shortest Straw | 395389 |
| The Unforgiven II | 395520 |
| 22 Acacia Avenue | 395572 |
| King For A Day | 395859 |
| The Thing That Should Not Be | 396199 |
| Save Me (Remix) | 396303 |
| Deep Waters | 396460 |
| Creeping Death | 396878 |
| Astronomy | 397531 |
| Ride The Lightning | 397740 |
| Still Of The Night | 398210 |
| Thank You | 398262 |
| Helpless | 398315 |
| Jizzlobber | 398341 |
| The House Jack Built | 398942 |
| The Edge Of Darkness | 399333 |
| Soot & Stars | 399986 |
| Terra | 401319 |
| Babe I'm Gonna Leave You | 401475 |
| Dazed and Confused | 401920 |
| Jerusalem | 402390 |
| Blackened | 403382 |
| The Small Hours | 403435 |
| Wherever I May Roam | 404323 |
| Computadores Fazem Arte | 404323 |
| Third Stone From The Sun | 404453 |
| Girl From A Pawnshop | 404688 |
| The Educated Fool | 404767 |
| Blue Train | 405028 |
| Karelia Suite, Op.11: 2. Ballade (Tempo Di Menuetto) | 406000 |
| Paradise City | 406347 |
| Daughter | 407484 |
| Powerslave | 407823 |
| Afraid To Shoot Strangers | 407980 |
| Down by the Sea | 408163 |
| Ghost Of The Navigator | 408607 |
| Revelations | 408607 |
| My Friend Of Misery | 409547 |
| You Sent Me Flying / Cherry | 409906 |
| Samba Da BÃªnÃ§Ã£o | 409965 |
| Ghost Of The Navigator | 410070 |
| Se Liga | 410409 |
| In The Evening | 410566 |
| Wellington's Victory or the Battle Symphony, Op.91: 2. Symphony of Triumph | 412000 |
| These Colours Don't Run | 412152 |
| Afraid To Shoot Strangers | 412525 |
| Norwegian Wood | 413910 |
| Where The Wild Things Are | 414380 |
| Four Walled World | 414474 |
| Fade To Black | 414824 |
| No No No | 414902 |
| Black | 415712 |
| Seek & Destroy | 415817 |
| Since I've Been Loving You | 416365 |
| Afraid To Shoot Strangers | 416496 |
| Phantom Of The Opera | 418168 |
| Rehab (Hot Chip Remix) | 418293 |
| Lemon | 418324 |
| Snowblind | 420022 |
| No Quarter | 420493 |
| A Bencao E Outros | 421093 |
| Voce Nao Entende Nada - Cotidiano | 421982 |
| Scam | 422321 |
| Otay | 423653 |
| Knocking At Your Back Door | 424829 |
| Breakdown | 424960 |
| Time | 425195 |
| Journeyman | 427023 |
| When The Levee Breaks | 427702 |
| 05 - Phantom of the Opera | 428016 |
| Light My Fire | 428329 |
| Inside Job | 428643 |
| Hallowed Be Thy Name | 428669 |
| The Unnamed Feeling | 429479 |
| Shoot Me Again | 430210 |
| Layla | 430733 |
| Victim Of Change (Live) | 430942 |
| Hard Lovin' Man | 431203 |
| Hallowed Be Thy Name (Live) [Non Album Bonus Track] | 431262 |
| Fear Of The Dark | 431333 |
| Fear Of The Dark | 431542 |
| The Four Horsemen | 433188 |
| Stone Crazy | 433397 |
| Blood Brothers | 434442 |
| Blood Brothers | 435513 |
| Master Of Puppets | 436453 |
| Sozinho (Hitmakers Classic Mix) | 436636 |
| Fear Of The Dark | 436976 |
| Leave | 437968 |
| River Song | 439510 |
| Heaven Can Wait | 440555 |
| Phantom Of The Opera | 441155 |
| St. Anger | 441234 |
| Heaven Can Wait | 441417 |
| No More Lies | 441782 |
| Lazy | 442096 |
| The Reincarnation of Benjamin Breeg | 442106 |
| Fortunes Of War | 443977 |
| Hallowed Be Thy Name | 443977 |
| Since I've Been Loving You | 444055 |
| No More Tears | 444358 |
| Lord of Light | 444614 |
| To Tame A Land | 445283 |
| Caught Somewhere in Time | 445779 |
| One | 446484 |
| Duende | 447582 |
| Hallowed Be Thy Name | 447791 |
| Heaven Can Wait | 448574 |
| Hallowed Be Thy Name | 451422 |
| Sometimes I Feel Like Screaming | 451840 |
| PaÃ­s Tropical | 452519 |
| Burn | 453955 |
| Powerslave | 454974 |
| Snoopy's search-Red baron | 456071 |
| Low Man's Lyric | 457639 |
| The Rain Song | 459180 |
| Wiser Time | 459990 |
| Fear Of The Dark | 460695 |
| Us And Them | 461035 |
| Civil War | 461165 |
| Once | 462837 |
| The Frayed Ends Of Sanity | 464039 |
| Smoke On The Water | 464378 |
| War Pigs | 464770 |
| Suicide Solution (With Guitar Solo) | 467069 |
| The Longest Day | 467810 |
| Come Back | 469968 |
| Am I Evil? | 470256 |
| Hallowed Be Thy Name | 471849 |
| Loverman | 472764 |
| Old Love | 472920 |
| Aeroplane Flies High | 473391 |
| Nefertiti | 473495 |
| Running Free | 474017 |
| Evil Ways | 475402 |
| Bye Bye Blackbird | 476003 |
| The Evil That Men Do | 478145 |
| Flight Of The Rat | 478302 |
| Out Of Control | 479242 |
| Stairway To Heaven | 481619 |
| Terra | 482429 |
| Concerto for Cello and Orchestra in E minor, Op. 85: I. Adagio - Moderato | 483133 |
| Don't Look To The Eyes Of A Stranger | 483657 |
| Steal Away (The Night) | 485720 |
| Petits Machins (Little Stuff) | 487392 |
| The Unbeliever | 490422 |
| You Oughta Know (Alternate) | 491885 |
| Concerto for Violin, Strings and Continuo in G Major, Op. 3, No. 9: I. Allegro | 493573 |
| The Real Thing | 493635 |
| Book Of Thel | 494393 |
| Wheels Of Confusion / The Straightener | 494524 |
| Iron Maiden | 494602 |
| Fixxxer | 496065 |
| Sir Psycho Sexy | 496692 |
| Disposable Heroes | 496718 |
| LOST In 8:15 | 497163 |
| Bleeding Me | 497998 |
| Orion | 500062 |
| Fools | 500427 |
| Miserere mei, Deus | 501503 |
| Title Song | 505521 |
| Some Kind Of Monster | 505626 |
| Rain Song | 505808 |
| Where The River Goes | 505991 |
| The Thin Line Between Love & Hate | 506801 |
| How Many More Times | 508055 |
| Paschendale | 508107 |
| Kashmir | 508604 |
| The Alchemist | 509413 |
| Invisible Kid | 510197 |
| Blow Your Mind | 512339 |
| Dark Corners | 513541 |
| Won't Get Fooled Again (Full Length Version) | 513750 |
| Year to the Day | 514612 |
| Master Of Puppets | 515239 |
| War Pigs | 515435 |
| Alexander the Great | 515631 |
| Dance Of Death | 516649 |
| A E O Z | 518556 |
| By-Tor And The Snow Dog | 519888 |
| Jupiter, the Bringer of Jollity | 522099 |
| Locomotive | 522396 |
| Whistle Stop | 526132 |
| Brighter Than a Thousand Suns | 526255 |
| Black Light Syndrome | 526471 |
| On the Beautiful Blue Danube | 526696 |
| In The Light | 526785 |
| All Within My Hands | 527986 |
| She Wears Black | 528666 |
| Riviera Paradise | 528692 |
| Stairway To Heaven | 529658 |
| Just Another Story | 529684 |
| Chaos-Control | 529841 |
| The Call Of Ktulu | 534883 |
| November Rain | 537540 |
| The Clansman | 539689 |
| Faroeste Caboclo | 543007 |
| Someday My Prince Will Come | 544078 |
| Scheherazade, Op. 35: I. The Sea and Sindbad's Ship | 545203 |
| Tuesday's Gone | 545750 |
| Release | 546063 |
| The Nomad | 546115 |
| Jesus Of Suburbia / City Of The Damned / I Don't Care / Dearly Beloved / Tales Of Another Broken Home | 548336 |
| Falling in Circles | 549093 |
| Iron Man/Children of the Grave | 552308 |
| No More Tears | 555075 |
| Homecoming / The Death Of St. Jimmy / East 12th St. / Nobody Likes You / Rock And Roll Girlfriend / We're Coming Home Again | 558602 |
| The Clansman | 559203 |
| Concerto for Piano No. 2 in F Minor, Op. 21: II. Larghetto | 560342 |
| Dream Of Mirrors | 561162 |
| Symphonie Fantastique, Op. 14: V. Songe d'une nuit du sabbat | 561967 |
| The Legacy | 562966 |
| Estranged | 563800 |
| So What | 564009 |
| For the Greater Good of God | 564893 |
| Tea For One | 566752 |
| Symphony No. 3 Op. 36 for Orchestra and Soprano Symfonia Piesni Zalosnych \ Lento E Largo - Tranquillissimo | 567494 |
| Blind Curve: Vocal Under A Bloodlight / Passing Strangers / Mylo / Perimeter Walk / Threshold | 569704 |
| La Villa Strangiato | 577488 |
| Dream Of Mirrors | 578324 |
| The Messiah: Behold, I Tell You a Mystery... The Trumpet Shall Sound | 582029 |
| Stratus | 582086 |
| Book of Hours | 583366 |
| ...And Justice For All | 585769 |
| To Live Is To Die | 588564 |
| The Outlaw Torn | 588721 |
| Talkin' 'Bout Women Obviously | 589531 |
| All I Want Is You | 591986 |
| The Angel And The Gambler | 592744 |
| Jingo | 592953 |
| Seventh Son of a Seventh Son | 593580 |
| Adagio for Strings from the String Quartet, Op. 11 | 596519 |
| Child In Time (Son Of Aleric - Instrumental) | 602880 |
| Coma | 616511 |
| Revolution 1993 | 616829 |
| Smoke On The Water | 618031 |
| The Way You Do To Mer | 618344 |
| You Shook Me(2) | 619467 |
| Child In Time | 620460 |
| Achilles Last Stand | 625502 |
| La Puesta Del Sol | 628062 |
| Carouselambra | 634435 |
| Fried Neckbones And Home Fries | 638563 |
| Sleeping Village | 644571 |
| Sign Of The Cross | 649116 |
| Stairway To Heaven | 657293 |
| Outbreak | 659226 |
| Amy Amy Amy (Outro) | 663426 |
| I Heard It Through The Grapevine | 664894 |
| In My Time Of Dying | 666017 |
| Xanadu | 667428 |
| Mercyful Fate | 671712 |
| Reach Down | 672773 |
| Advance Romance | 677694 |
| Sign Of The Cross | 678008 |
| The End | 701831 |
| How Many More Times | 711836 |
| El Corazon Manda | 713534 |
| The Calling | 747755 |
| No Quarter | 749897 |
| Mistreated | 758648 |
| You Fool No One (Alternate Version) | 763924 |
| Moby Dick | 766354 |
| Rime Of The Ancient Mariner | 789472 |
| You Fool No One | 804101 |
| Walkin' | 807392 |
| Rime of the Ancient Mariner | 816509 |
| Whole Lotta Love (Medley) | 825103 |
| Miles Runs The Voodoo Down | 843964 |
| Just Ain't Good Enough | 850259 |
| Mistreated (Alternate Version) | 854700 |
| Whole Lotta Love | 863895 |
| The Sun Road | 880640 |
| Santana Jam | 882834 |
| My Funny Valentine (Live) | 907520 |
| Going Down / Highway Star | 913658 |
| Funky Piano | 934791 |
| We've Got To Get Together/Jingo | 1070027 |
| Dazed And Confused | 1116734 |
| Space Truckin' | 1196094 |
| Michael's Birthday | 1237791 |
| The Dundies | 1253541 |
| The Carpet | 1264375 |
| The Secret | 1264875 |
| Booze Cruise | 1267958 |
| Product Recall | 1268268 |
| Take Your Daughter to Work Day | 1268333 |
| Valentine's Day | 1270375 |
| Safety Training | 1271229 |
| Phyllis's Wedding | 1271521 |
| Back from Vacation | 1271688 |
| Ben Franklin | 1271938 |
| Cocktails | 1272522 |
| The Convict | 1273064 |
| Conflict Resolution | 1274583 |
| The Injury | 1275275 |
| The Coup | 1276526 |
| Dwight's Speech | 1278041 |
| Boys and Girls | 1278333 |
| Drug Testing | 1278625 |
| Diwali | 1279904 |
| The Initiation | 1280113 |
| Christmas Party | 1282115 |
| Grief Counseling | 1282615 |
| The Fire | 1288166 |
| Traveling Salesmen | 1289039 |
| Office Olympics | 1290458 |
| Performance Review | 1292458 |
| Sexual Harassment | 1294541 |
| The Convention | 1297213 |
| The Client | 1299341 |
| Business School | 1302093 |
| Diversity Day | 1306416 |
| Halloween | 1315333 |
| The Alliance | 1317125 |
| The Fight | 1320028 |
| Health Care | 1321791 |
| Basketball | 1323541 |
| Hot Girl | 1325458 |
| Gay Witch Hunt | 1326534 |
| Email Surveillance | 1328870 |
| The Office: An American Workplace (Pilot) | 1380833 |
| Dazed And Confused | 1612329 |
| Beach Games | 1676134 |
| Producer's Cut: The Return | 1700241 |
| The Return | 1705080 |
| Casino Night - Season Finale | 1712791 |
| Women's Appreciation | 1732649 |
| The Negotiation | 1767851 |
| The Merger | 1801926 |
| Branch Closing | 1814855 |
| Branch Closing | 1822781 |
| Lost (Pilot, Part 2) | 2436583 |
| Live Together, Die Alone, Pt. 1 | 2478041 |
| Pilot | 2484567 |
| Past, Present, and Future | 2492867 |
| There's No Place Like Home, Pt. 2 | 2497956 |
| Homecoming | 2515882 |
| A Benihana Christmas, Pts. 1 & 2 | 2519436 |
| Hiros | 2533575 |
| The Job | 2541875 |
| Lost (Pilot, Part 1) [premiere] | 2548875 |
| All the Best Cowboys Have Daddy Issues | 2555492 |
| Catch-22 | 2561394 |
| ...And Found | 2563833 |
| A Measure of Salvation | 2563938 |
| Further Instructions | 2563980 |
| Collision | 2564916 |
| Adrift | 2564958 |
| Don't Look Back | 2571154 |
| White Rabbit | 2571965 |
| Better Halves | 2573031 |
| Deus Ex Machina | 2582009 |
| There's No Place Like Home, Pt. 3 | 2582957 |
| 0.07% | 2585794 |
| Abandoned | 2587041 |
| Walkabout | 2587370 |
| Five Years Gone | 2587712 |
| Ji Yeon | 2588797 |
| House of the Rising Sun | 2590032 |
| Distractions | 2590382 |
| Raised By Another | 2590459 |
| The Shape of Things to Come | 2591299 |
| ExposÃ© | 2593760 |
| Fallout | 2594761 |
| Unexpected | 2598139 |
| The Fix | 2600266 |
| Fire + Water | 2600333 |
| Landslide | 2600725 |
| The Hard Part | 2601017 |
| Company Man | 2601101 |
| Company Man | 2601226 |
| Homecoming | 2601351 |
| Run! | 2602602 |
| Parasite | 2602727 |
| Six Months Ago | 2602852 |
| ...In Translation | 2604575 |
| The Other Woman | 2605021 |
| Collision | 2605480 |
| Exodus (Part 2) [Season Finale] | 2605557 |
| Nothing to Hide | 2605647 |
| One Giant Leap | 2607649 |
| Eggtown | 2608817 |
| The Economist | 2609025 |
| Orientation | 2609083 |
| Everybody Hates Hugo | 2609192 |
| There's No Place Like Home, Pt. 1 | 2609526 |
| Numbers | 2609772 |
| The Whole Truth | 2610125 |
| Lockdown | 2610250 |
| What Kate Did | 2610250 |
| The 23rd Psalm | 2610416 |
| The Other 48 Days | 2610625 |
| Through the Looking Glass, Pt. 1 | 2610860 |
| Two for the Road | 2610958 |
| The Hunting Party | 2611333 |
| The Constant | 2611569 |
| The Beginning of the End | 2611903 |
| Confirmed Dead | 2611986 |
| Genesis | 2611986 |
| Cabin Fever | 2612028 |
| Meet Kevin Johnson | 2612028 |
| Man of Science, Man of Faith (Premiere) | 2612250 |
| Something Nice Back Home | 2612779 |
| Solitary | 2612894 |
| Seven Minutes to Midnight | 2613988 |
| Confidence Man | 2615244 |
| The Man Behind the Curtain | 2615990 |
| D.O.C. | 2616032 |
| Whatever the Case May Be | 2616410 |
| Through the Looking Glass, Pt. 2 | 2617117 |
| Greatest Hits | 2617117 |
| The Brig | 2617325 |
| The Greater Good | 2617784 |
| Exodus, Pt. 2 | 2618000 |
| Do No Harm | 2618487 |
| Special | 2618530 |
| Born to Run | 2618619 |
| The Eye of Jupiter | 2618750 |
| Hearts and Minds | 2619462 |
| Exodus (Part 3) [Season Finale] | 2619869 |
| Outlaws | 2619887 |
| A Day In the Life | 2620245 |
| Exodus (Part 1) | 2620747 |
| Exodus, Pt. 1 | 2621708 |
| The Son Also Rises | 2621830 |
| Unfinished Business | 2622038 |
| Battlestar Galactica: The Story So Far | 2622250 |
| Maelstrom | 2622372 |
| Crossroads, Pt. 1 | 2622622 |
| The Passage | 2623875 |
| Taking a Break from All Your Worries | 2624207 |
| Rapture | 2624541 |
| The Woman King | 2626376 |
| Collaborators | 2626626 |
| Tabula Rasa | 2627105 |
| I Do | 2627791 |
| Dirty Hands | 2627961 |
| Enter 77 | 2629796 |
| Par Avion | 2629879 |
| Torn | 2631291 |
| The Moth | 2631327 |
| Lost Survival Guide | 2632590 |
| Tricia Tanaka Is Dead | 2635010 |
| Left Behind | 2635343 |
| Stranger In a Strange Land | 2636428 |
| Flashes Before Your Eyes | 2636636 |
| A Tale of Two Cities | 2636970 |
| Not In Portland | 2637303 |
| Not In Portland | 2637345 |
| Every Man for Himself | 2637387 |
| The Glass Ballerina | 2637458 |
| The Cost of Living | 2637500 |
| The Man from Tallahassee | 2637637 |
| One of Us | 2638096 |
| S.O.S. | 2639541 |
| Live Together, Die Alone, Pt. 2 | 2656531 |
| The Long Con | 2679583 |
| How to Stop an Exploding Man | 2687103 |
| One of Them | 2698791 |
| Hero | 2713755 |
| Three Minutes | 2763666 |
| Maternity Leave | 2780416 |
| ? | 2782333 |
| Dave | 2825166 |
| The Young Lords | 2863571 |
| Crossroads, Pt. 2 | 2869953 |
| Greetings from Earth, Pt. 2 | 2903778 |
| The Gun On Ice Planet Zero, Pt. 1 | 2907615 |
| Lost Planet of the Gods, Pt. 2 | 2914664 |
| The Lost Warrior | 2920045 |
| Baltar's Escape | 2922088 |
| Lost Planet of the Gods, Pt. 1 | 2922547 |
| War of the Gods, Pt. 1 | 2922630 |
| The Living Legend, Pt. 2 | 2923298 |
| War of the Gods, Pt. 2 | 2923381 |
| Experiment In Terra | 2923548 |
| The Hand of God | 2924007 |
| The Gun On Ice Planet Zero, Pt. 2 | 2924341 |
| The Living Legend, Pt. 1 | 2924507 |
| The Magnificent Warriors | 2924716 |
| The Long Patrol | 2925008 |
| Fire In Space | 2926593 |
| Take the Celestra | 2927677 |
| Battlestar Galactica, Pt. 3 | 2927802 |
| Murder On the Rising Star | 2935894 |
| Battlestar Galactica, Pt. 1 | 2952702 |
| Battlestar Galactica, Pt. 2 | 2956081 |
| The Man With Nine Lives | 2956998 |
| Greetings from Earth, Pt. 1 | 2960293 |
| Through a Looking Glass | 5088838 |
| Occupation / Precipice | 5286953 |

1. Find how much amount spent by each customer on artists? Write a query to return

customer name, artist name and total spent

Query:

WITH best\_selling\_artist AS (

SELECT artist.artist\_id AS artist\_id, artist.name AS artist\_name, SUM(invoice\_line.unit\_price\*invoice\_line.quantity) AS total\_sales

FROM invoice\_line

JOIN track ON track.track\_id = invoice\_line.track\_id

JOIN album ON album.album\_id = track.album\_id

JOIN artist ON artist.artist\_id = album.artist\_id

GROUP BY 1

ORDER BY 3 DESC

LIMIT 1

)

SELECT c.customer\_id, c.first\_name, c.last\_name, bsa.artist\_name, SUM(il.unit\_price\*il.quantity) AS amount\_spent

FROM invoice i

JOIN customer c ON c.customer\_id = i.customer\_id

JOIN invoice\_line il ON il.invoice\_id = i.invoice\_id

JOIN track t ON t.track\_id = il.track\_id

JOIN album alb ON alb.album\_id = t.album\_id

JOIN best\_selling\_artist bsa ON bsa.artist\_id = alb.artist\_id

GROUP BY 1,2,3,4

ORDER BY 5 DESC;

Output:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| customer\_id | first\_name | last\_name | artist\_name | amount\_spent |
| 46 | Hugh | O'Reilly | Queen | 27.72 |
| 38 | Niklas | SchrÃ¶der | Queen | 18.81 |
| 3 | FranÃ§ois | Tremblay | Queen | 17.82 |
| 34 | JoÃ£o | Fernandes | Queen | 16.83 |
| 53 | Phil | Hughes | Queen | 11.88 |
| 41 | Marc | Dubois | Queen | 11.88 |
| 47 | Lucas | Mancini | Queen | 10.89 |
| 33 | Ellie | Sullivan | Queen | 10.89 |
| 20 | Dan | Miller | Queen | 3.96 |
| 5 | R | Madhav | Queen | 3.96 |
| 23 | John | Gordon | Queen | 2.97 |
| 54 | Steve | Murray | Queen | 2.97 |
| 31 | Martha | Silk | Queen | 2.97 |
| 16 | Frank | Harris | Queen | 1.98 |
| 17 | Jack | Smith | Queen | 1.98 |
| 24 | Frank | Ralston | Queen | 1.98 |
| 30 | Edward | Francis | Queen | 1.98 |
| 35 | Madalena | Sampaio | Queen | 1.98 |
| 36 | Hannah | Schneider | Queen | 1.98 |
| 11 | Alexandre | Rocha | Queen | 1.98 |
| 8 | Daan | Peeters | Queen | 1.98 |
| 42 | Wyatt | Girard | Queen | 1.98 |
| 44 | Terhi | HÃ¤mÃ¤lÃ¤inen | Queen | 1.98 |
| 1 | LuÃ­s | GonÃ§alves | Queen | 1.98 |
| 48 | Johannes | Van der Berg | Queen | 1.98 |
| 49 | StanisÅ‚aw | WÃ³jcik | Queen | 1.98 |
| 52 | Emma | Jones | Queen | 1.98 |
| 57 | Luis | Rojas | Queen | 1.98 |
| 15 | Jennifer | Peterson | Queen | 1.98 |
| 28 | Julia | Barnett | Queen | 1.98 |
| 27 | Patrick | Gray | Queen | 0.99 |
| 58 | Manoj | Pareek | Queen | 0.99 |
| 45 | Ladislav | KovÃ¡cs | Queen | 0.99 |
| 26 | Richard | Cunningham | Queen | 0.99 |
| 59 | Puja | Srivastava | Queen | 0.99 |
| 13 | Fernanda | Ramos | Queen | 0.99 |
| 6 | Helena | HolÃ½ | Queen | 0.99 |
| 22 | Heather | Leacock | Queen | 0.99 |
| 19 | Tim | Goyer | Queen | 0.99 |
| 39 | Camille | Bernard | Queen | 0.99 |
| 55 | Mark | Taylor | Queen | 0.99 |
| 50 | Enrique | MuÃ±oz | Queen | 0.99 |
| 43 | Isabelle | Mercier | Queen | 0.99 |

2. We want to find out the most popular music Genre for each country. We determine the

most popular genre as the genre with the highest amount of purchases. Write a query

that returns each country along with the top Genre. For countries where the maximum

number of purchases is shared return all Genres

Query:

WITH popular\_genre AS

(

SELECT COUNT(invoice\_line.quantity) AS purchases, customer.country, genre.name, genre.genre\_id,

ROW\_NUMBER() OVER(PARTITION BY customer.country ORDER BY COUNT(invoice\_line.quantity) DESC) AS RowNo

FROM invoice\_line

JOIN invoice ON invoice.invoice\_id = invoice\_line.invoice\_id

JOIN customer ON customer.customer\_id = invoice.customer\_id

JOIN track ON track.track\_id = invoice\_line.track\_id

JOIN genre ON genre.genre\_id = track.genre\_id

GROUP BY 2,3,4

ORDER BY 2 ASC, 1 DESC

)

SELECT \* FROM popular\_genre WHERE RowNo <= 1

Output:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| purchases | country | name | genre\_id | rowno |
| 17 | Argentina | Alternative & Punk | 4 | 1 |
| 34 | Australia | Rock | 1 | 1 |
| 40 | Austria | Rock | 1 | 1 |
| 26 | Belgium | Rock | 1 | 1 |
| 205 | Brazil | Rock | 1 | 1 |
| 333 | Canada | Rock | 1 | 1 |
| 61 | Chile | Rock | 1 | 1 |
| 143 | Czech Republic | Rock | 1 | 1 |
| 24 | Denmark | Rock | 1 | 1 |
| 46 | Finland | Rock | 1 | 1 |
| 211 | France | Rock | 1 | 1 |
| 194 | Germany | Rock | 1 | 1 |
| 44 | Hungary | Rock | 1 | 1 |
| 102 | India | Rock | 1 | 1 |
| 72 | Ireland | Rock | 1 | 1 |
| 35 | Italy | Rock | 1 | 1 |
| 33 | Netherlands | Rock | 1 | 1 |
| 40 | Norway | Rock | 1 | 1 |
| 40 | Poland | Rock | 1 | 1 |
| 108 | Portugal | Rock | 1 | 1 |
| 46 | Spain | Rock | 1 | 1 |
| 60 | Sweden | Rock | 1 | 1 |
| 166 | United Kingdom | Rock | 1 | 1 |
| 561 | USA | Rock | 1 | 1 |

/\* Method 2: : Using Recursive \*/

Query:

WITH RECURSIVE

sales\_per\_country AS(

SELECT COUNT(\*) AS purchases\_per\_genre, customer.country, genre.name, genre.genre\_id

FROM invoice\_line

JOIN invoice ON invoice.invoice\_id = invoice\_line.invoice\_id

JOIN customer ON customer.customer\_id = invoice.customer\_id

JOIN track ON track.track\_id = invoice\_line.track\_id

JOIN genre ON genre.genre\_id = track.genre\_id

GROUP BY 2,3,4

ORDER BY 2

),

max\_genre\_per\_country AS (SELECT MAX(purchases\_per\_genre) AS max\_genre\_number, country

FROM sales\_per\_country

GROUP BY 2

ORDER BY 2)

SELECT sales\_per\_country.\*

FROM sales\_per\_country

JOIN max\_genre\_per\_country ON sales\_per\_country.country = max\_genre\_per\_country.country

WHERE sales\_per\_country.purchases\_per\_genre = max\_genre\_per\_country.max\_genre\_number;

Output:

|  |  |  |  |
| --- | --- | --- | --- |
| purchases\_per\_genre | country | name | genre\_id |
| 17 | Argentina | Alternative & Punk | 4 |
| 34 | Australia | Rock | 1 |
| 40 | Austria | Rock | 1 |
| 26 | Belgium | Rock | 1 |
| 205 | Brazil | Rock | 1 |
| 333 | Canada | Rock | 1 |
| 61 | Chile | Rock | 1 |
| 143 | Czech Republic | Rock | 1 |
| 24 | Denmark | Rock | 1 |
| 46 | Finland | Rock | 1 |
| 211 | France | Rock | 1 |
| 194 | Germany | Rock | 1 |
| 44 | Hungary | Rock | 1 |
| 102 | India | Rock | 1 |
| 72 | Ireland | Rock | 1 |
| 35 | Italy | Rock | 1 |
| 33 | Netherlands | Rock | 1 |
| 40 | Norway | Rock | 1 |
| 40 | Poland | Rock | 1 |
| 108 | Portugal | Rock | 1 |
| 46 | Spain | Rock | 1 |
| 60 | Sweden | Rock | 1 |
| 166 | United Kingdom | Rock | 1 |
| 561 | USA | Rock | 1 |

3. Write a query that determines the customer that has spent the most on music for each

country. Write a query that returns the country along with the top customer and how

much they spent. For countries where the top amount spent is shared, provide all

customers who spent this amount

Query:

/\* Method 1: using CTE \*/

WITH Customter\_with\_country AS (

SELECT customer.customer\_id,first\_name,last\_name,billing\_country,SUM(total) AS total\_spending,

ROW\_NUMBER() OVER(PARTITION BY billing\_country ORDER BY SUM(total) DESC) AS RowNo

FROM invoice

JOIN customer ON customer.customer\_id = invoice.customer\_id

GROUP BY 1,2,3,4

ORDER BY 4 ASC,5 DESC)

SELECT \* FROM Customter\_with\_country WHERE RowNo <= 1

Output:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| customer\_id | first\_name | last\_name | billing\_country | total\_spending | rowno |
| 56 | Diego | GutiÃ©rrez | Argentina | 39.6 | 1 |
| 55 | Mark | Taylor | Australia | 81.18 | 1 |
| 7 | Astrid | Gruber | Austria | 69.3 | 1 |
| 8 | Daan | Peeters | Belgium | 60.39 | 1 |
| 1 | LuÃ­s | GonÃ§alves | Brazil | 108.9 | 1 |
| 3 | FranÃ§ois | Tremblay | Canada | 99.99 | 1 |
| 57 | Luis | Rojas | Chile | 97.02 | 1 |
| 5 | R | Madhav | Czech Republic | 144.54 | 1 |
| 9 | Kara | Nielsen | Denmark | 37.62 | 1 |
| 44 | Terhi | HÃ¤mÃ¤lÃ¤inen | Finland | 79.2 | 1 |
| 42 | Wyatt | Girard | France | 99.99 | 1 |
| 37 | Fynn | Zimmermann | Germany | 94.05 | 1 |
| 45 | Ladislav | KovÃ¡cs | Hungary | 78.21 | 1 |
| 58 | Manoj | Pareek | India | 111.87 | 1 |
| 46 | Hugh | O'Reilly | Ireland | 114.84 | 1 |
| 47 | Lucas | Mancini | Italy | 50.49 | 1 |
| 48 | Johannes | Van der Berg | Netherlands | 65.34 | 1 |
| 4 | BjÃ¸rn | Hansen | Norway | 72.27 | 1 |
| 49 | StanisÅ‚aw | WÃ³jcik | Poland | 76.23 | 1 |
| 34 | JoÃ£o | Fernandes | Portugal | 102.96 | 1 |
| 50 | Enrique | MuÃ±oz | Spain | 98.01 | 1 |
| 51 | Joakim | Johansson | Sweden | 75.24 | 1 |
| 53 | Phil | Hughes | United Kingdom | 98.01 | 1 |
| 17 | Jack | Smith | USA | 98.01 | 1 |

/\* Method 2: Using Recursive \*/

Query:

WITH RECURSIVE

customter\_with\_country AS (

SELECT customer.customer\_id,first\_name,last\_name,billing\_country,SUM(total) AS total\_spending

FROM invoice

JOIN customer ON customer.customer\_id = invoice.customer\_id

GROUP BY 1,2,3,4

ORDER BY 2,3 DESC),

country\_max\_spending AS(

SELECT billing\_country,MAX(total\_spending) AS max\_spending

FROM customter\_with\_country

GROUP BY billing\_country)

SELECT cc.billing\_country, cc.total\_spending, cc.first\_name, cc.last\_name, cc.customer\_id

FROM customter\_with\_country cc

JOIN country\_max\_spending ms

ON cc.billing\_country = ms.billing\_country

WHERE cc.total\_spending = ms.max\_spending

ORDER BY 1;

Output:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| billing\_country | total\_spending | first\_name | last\_name | customer\_id |
| Argentina | 39.6 | Diego | GutiÃ©rrez | 56 |
| Australia | 81.18 | Mark | Taylor | 55 |
| Austria | 69.3 | Astrid | Gruber | 7 |
| Belgium | 60.39 | Daan | Peeters | 8 |
| Brazil | 108.9 | LuÃ­s | GonÃ§alves | 1 |
| Canada | 99.99 | FranÃ§ois | Tremblay | 3 |
| Chile | 97.02 | Luis | Rojas | 57 |
| Czech Republic | 144.54 | R | Madhav | 5 |
| Denmark | 37.62 | Kara | Nielsen | 9 |
| Finland | 79.2 | Terhi | HÃ¤mÃ¤lÃ¤inen | 44 |
| France | 99.99 | Wyatt | Girard | 42 |
| Germany | 94.05 | Fynn | Zimmermann | 37 |
| Hungary | 78.21 | Ladislav | KovÃ¡cs | 45 |
| India | 111.87 | Manoj | Pareek | 58 |
| Ireland | 114.84 | Hugh | O'Reilly | 46 |
| Italy | 50.49 | Lucas | Mancini | 47 |
| Netherlands | 65.34 | Johannes | Van der Berg | 48 |
| Norway | 72.27 | BjÃ¸rn | Hansen | 4 |
| Poland | 76.23 | StanisÅ‚aw | WÃ³jcik | 49 |
| Portugal | 102.96 | JoÃ£o | Fernandes | 34 |
| Spain | 98.01 | Enrique | MuÃ±oz | 50 |
| Sweden | 75.24 | Joakim | Johansson | 51 |
| United Kingdom | 98.01 | Phil | Hughes | 53 |
| USA | 98.01 | Jack | Smith | 17 |