

----- problem 1 -----

[('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'alternative hip hop'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'alternative rock'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'electronic'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'experimental'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'experimental rock'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'finish'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'folk'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'folk rock'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'freak folk'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'hip hop'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'illinois'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'indie rock'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'lo-fi'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'new weird america'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'psychedelic'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'psychedelic folk'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'psychedelic rock'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'r&b'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'rap'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'rock'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'space rock'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'united states'), ('ARR4EXL1187B9A4E3C', 'Demetrios Pogis Orchestra', 'urban'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'alternative hip hop'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'alternative rock'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'electronic'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'experimental'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'experimental rock'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'finish'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'folk'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'folk rock'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'freak folk'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'hip hop'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'illinois'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'indie rock'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'lo-fi'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'new weird america'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'psychedelic'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'psychedelic folk'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'psychedelic rock'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'r&b'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'rap'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'rock'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'space rock'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'united states'), ('ARR4EXL1187B9A4E3C', 'Hall Of Fame', 'urban'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'alternative hip hop'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'alternative rock'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'electronic'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'experimental'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'experimental rock'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'finish'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'folk'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'folk rock'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'freak folk'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'hip hop'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'illinois'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'indie rock'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'lo-fi'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'new weird america'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'psychedelic'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'psychedelic folk'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'psychedelic rock'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'r&b'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'rap'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'rock'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'space rock'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'united states'), ('ARR4EXL1187B9A4E3C', 'Rollerskate Skinny', 'urban'), ('ARR4EXL1187B9A4E3C', 'Voyager Series',

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----- problem 2 -----

['Bung', 'A Lonely World', 'Demons at Work', 'Summer Song (LP Version)', 'Old Friend', 'Groovejet (If This Ain't Love)', 'What Could Be More Beautiful?', 'Animal', 'The Fact', 'Mina Fäders Hall', 'Las Manos Del Mundo', 'The Girl Next Door', 'Ready For Love', 'Whatcha Got', 'Disco Rocker', 'Can't Take My Eyes Off Of You', 'Two Faced Promises', 'Bernard Lavilliers [En Public]', 'Lay This On You', 'Ultraviolence', 'Little bit further', 'Danzonete "Rompiendo La Rutina", 'Pida Me la', 'Jägermarsch', 'Get Down', 'Te Necesito (Directo 2003)', 'Ghetto Religion', 'Libérée', 'El Muchacho Alegre (Album Version)', 'Blueprint For Destruction of Earth', 'Fanfare für den faulen Trompeter Version A', 'Cure For The Common Heartache', 'Make It Work', 'Carta De Amor', 'Shoreless', 'Song 1 04-23-1988', 'Busta Beat', 'Dark Eyes - Schwarze Augen', 'Mi nostalgia', 'Gmari', 'Algun dia', 'Touch Me', 'Rabbit_ Skunk', 'La Pitologa', 'Un Dia A La Vez', 'Mal Amor', 'That'll Do It', 'I'm Gonna Live Some Before I Die', 'In The Bleak Midwinter', 'Le creux des rêves', 'Malinka', 'Mi Bohio - Original', 'Clockwise', 'You Rock My World (In The Style Of Michael Jackson)', 'Thelisi Rama', 'Florida (Move Your Feet)', 'My Babies', 'My Man_ He's a Lovin' Man (Live Version)', 'Like They Say', 'Si Me Queres Vendra', 'The Promise (As Made Famous by When in Rome) (ReMixed)', 'The Freshman 15', 'Speculious', 'Erzähl mir von ihr', 'If a bwoy box you (Remixed by Lowki)', 'Hoy Quisiera', 'Make The Grade', 'Tienen Un Problema', 'Auch ich hab' dich gern', 'Writer's Block', 'One Shot [Live From Madison Square Garden]', 'Love Is Pleasing', 'Cherokee', 'I Wanna Love You Forever', 'Asi Te Quiero', 'pb&j', 'Se Sensation', 'El Mundo Es Mio', 'Mambo n 5', 'Super Trip 3000', 'Coloured Dreams', 'Hair', 'La Rumba Dels 60', 'Avalon', 'Grey Skies', 'Du bist die Richtige', 'The Letter (Edited)', 'lupi_ ia!', 'Above All (Album)', 'Cuando Pienso En Ti', 'You Can Hurry Up', 'Static [Live in Tokyo_ Japan_ February 5_ 2002]', 'Pig Meat Is What I Crave', 'Hot Stepper', 'Ignition x's 4', 'El Padrino', 'Love Theme', 'De Repente', 'Freshness Emergency (Album Version)', 'The Gypsy', 'Caruba', 'Welcome To The Revolutions', 'Universal Love', 'Träume sterben', 'La Danza De Las Sombras', 'Nostalgia - Original', 'John The Revelator (Boosta Edit)', 'Cosimha li', 'The Promise (As Made Famous by When in Rome) (NRG Remix)', 'Safari (Holden Remix)', 'Cachorro nu', 'What'cha Know About', 'One Dream (Original Mix)', 'Short Squeaky Cartoon Kiss', 'Holy', 'I'll Take You There', 'Keep It Inside', 'Summer Sun (Bailey's Filter Remix)', 'Sixième Étage (Live)', 'L'homme À La Moto (Live À L'Olympia 1956)', 'Discolights', 'Afro-Cuban Lullaby', 'My New Philosophy (From "You're A Good Man_ Charlie Brown")', 'Discoshit', 'Ain't That Peculiar', 'Cavaquinho', 'ISDN', 'Gimme No Lip (Live)']

----- problem 3 -----

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----- problem 4 -----

['00s alternative', '15th century', '16th century', '1910s', '19th century classical composer', '19th century opera', '20th century period', '21st century classical composer', '60s british rock', '60s girl pop', '70s hard rock', '70s psychedelia', '80s dance', '80s glam', '80s indie pop', '80s influenced', '80s thrash metal', '90s guitar music', '90s music', '90s r and b']

----- problem 5 -----

Mystic Revelation of Rastafari

----- problem 6 -----

249.71338394215326

----- problem 7 -----

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----- problem 8 -----

minimum time to run #1 query before creating index on the column artist_id: 1.0052475929260254

minimum time to run #1 query after creating index on the column artist_id: 1.9999998812636477e-07

----- problem 9 -----

number of unique track id before the delete and rollback: (866475,)

The tracks associated with artists that have the tag eurovision winner

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number of unique track id after the delete and rollback (866475,)