

TASK 7: Relational Database Queries - Relational Algebra

Student ID : 34269193

Student Name : Robiatul Adawiyah Al-Qosh

a. Question:

List the id, given name, and family name of all customers who live in 'DI Yogyakarta' region. There is only one region named 'DI Yogyakarta'.

Answer:

$R1 = \sigma_{p_name = 'DI Yogyakarta'} (CUSTOMER \bowtie_{CUSTOMER.p_region_code = REGION.p_region_code} REGION)$

$R = \pi_{customer_id, customer_gname, customer_fname} (R1)$

b. Question:

List the artist number, artist given name, artist family name, artwork number, artwork title of all artworks which were displayed at 'Semar Putih' gallery in June 2022 (ie. the start display date is between 1 June 2022 and 30 June 2022 inclusive). There is only one gallery named 'Semar Putih'.

Answer:

$R1 = \pi_{artist_code, artist_gname, artist_fname, artwork_no, artwork_title} (ARTIST \bowtie_{ARTIST.artist_code = ARTWORK.artist_code} ARTWORK)$

$R2 = \pi_{artist_code, artwork_no, aw_display_start_date, aw_display_end_date, gallery_name} (AW_DISPLAY \bowtie_{AW_DISPLAY.gallery_id = GALLERY.gallery_id} GALLERY)$

$R3 = \sigma_{gallery_name = 'Semar Putih' \text{ and } aw_display_start_date = '01-Jun-2022' \text{ and } aw_display_end_date = '30-Jun-2022'} (R1 \cup R2)$

$R = \pi_{artist_code, artist_gname, artist_fname, artwork_no, artwork_title} (R3)$