Adventure workshop

# Osnovni upiti

1. Ispiši sve komercijaliste
   * **SELECT \* FROM Komercijalist**;
2. Ispiši sve države
   * **SELECT \* FROM Drzava;**
3. Ispiši sve gradove koji nemaju dodijeljenu državu
   * **SELECT \* FROM Grad WHERE DrzavaID IS NULL;**
4. Ispiši sve kategorije proizvoda
   * **SELECT \* FROM Kategorija;**
5. Ispiši prvih 5 proizvoda
   * **SELECT \* FROM Proizvod LIMIT 5;**
6. Ispiši sve kupce iz odabranog grada (npr. GradID 2)
   * **SELECT \* FROM Kupac WHERE GradID = 2;**
7. Ispiši sve račune
   * **SELECT \* FROM Racun;**
8. Ispiši sve proizvode s minimalnom zalihom ispod 50
   * **SELECT \* FROM Proizvod WHERE MinimalnaKolicinaNaSkladistu < 50;**
9. Ispiši sve zapise o kupcima
   * **SELECT \* FROM Kupac;**
10. Ispiši sve kreditne kartice
    * **SELECT \* FROM KreditnaKartica;**

# Srednje složeni upiti

1. Izbroji proizvode u svakoj kategoriji
   * **SELECT PotkategorijaID, COUNT(\*) FROM Proizvod GROUP BY PotkategorijaID;**
2. Ispiši proizvode s minimalnim zalihama iznad određenog praga (npr. 100)
   * **SELECT \* FROM Proizvod WHERE MinimalnaKolicinaNaSkladistu > 100;**
3. Ispiši sve narudžbe koje je izvršio određeni kupac (npr. ID kupca 1)
   * **SELECT \* FROM Racun WHERE KupacID = 1;**
4. Ispiši ukupnu prodaju za svakog prodavača
   * **SELECT KomercijalistID, COUNT(\*) as UkupnoProdaja FROM Racun GROUP BY KomercijalistID;**
5. Ispiši sve gradove u određenoj zemlji (npr. ID zemlje 1)
   * **SELECT \* FROM Grad WHERE DrzavaID = 1;**
6. Ispiši gradove s pripadajućim nazivima država
   * **SELECT Grad.Naziv AS Grad, Drzava.Naziv AS Drzava FROM Grad JOIN Drzava ON Grad.DrzavaID = Drzava.IDDrzava;**
7. Ispiši proizvode bez dodijeljene potkategorije
   * **SELECT \* FROM Proizvod WHERE PotkategorijaID IS NULL;**
8. Ispiši kupce bez povezanih računa
   * **SELECT \* FROM Kupac WHERE IDKupac NOT IN (SELECT DISTINCT KupacID FROM Racun);**
9. Ispiši račune s njihovim ukupnim brojem stavki
   * **SELECT Racun.IDRacun, COUNT(Stavka.IDStavka) AS BrojStavki FROM Racun LEFT JOIN Stavka ON Racun.IDRacun = Stavka.RacunID GROUP BY Racun.IDRacun;**
10. Ispiši prodavače kod kojih je račun plaćen kreditnom karticom
    * **SELECT DISTINCT Komercijalist.\* FROM Komercijalist JOIN Racun ON Komercijalist.IDKomercijalist = Racun.KomercijalistID WHERE Racun.KreditnaKarticaID IS NOT NULL;**

# Napredni upiti s povezivanjem tablica

1. **Join Proizvod and Potkategorija to list products with their categories**
   * **Query:** **SELECT Proizvod.Naziv, Potkategorija.Naziv FROM Proizvod JOIN Potkategorija ON Proizvod.PotkategorijaID = Potkategorija.IDPotkategorija;**
   * **Solution:** Shows product names along with their corresponding category names.
2. **Find customers and their residing city names**
   * **Query:** **SELECT Kupac.Ime, Kupac.Prezime, Grad.Naziv FROM Kupac JOIN Grad ON Kupac.GradID = Grad.IDGrad;**
   * **Solution:** Lists customer names along with the names of the cities they reside in.
3. **Display orders along with customer and product details**
   * **Query:** **SELECT Racun.BrojRacuna, Kupac.Ime, Proizvod.Naziv FROM Racun JOIN Kupac ON Racun.KupacID = Kupac.IDKupac JOIN Stavka ON Racun.IDRacun = Stavka.RacunID JOIN Proizvod ON Stavka.ProizvodID = Proizvod.IDProizvod;**
   * **Solution:** Shows order numbers, customer names, and product names for each order.
4. **List products with their subcategory and main category names**
   * **Query:** **SELECT Proizvod.Naziv, Potkategorija.Naziv AS Potkategorija, Kategorija.Naziv AS Kategorija FROM Proizvod JOIN Potkategorija ON Proizvod.PotkategorijaID = Potkategorija.IDPotkategorija JOIN Kategorija ON Potkategorija.KategorijaID = Kategorija.IDKategorija;**
   * **Solution:** Retrieves product names along with their subcategory and main category names.
5. **Show sales records, including salesperson and customer names**

* **Query:** **SELECT Racun.BrojRacuna, Komercijalist.Ime AS KomercijalistIme, Kupac.Ime AS KupacIme FROM Racun JOIN Komercijalist ON Racun.KomercijalistID = Komercijalist.IDKomercijalist JOIN Kupac ON Racun.KupacID = Kupac.IDKupac;**
  + **Solution:** Displays the order numbers along with the names of the salesperson and the customer for each sale.

# Složeni upiti koji uključuju agregatne funkcije, podupite i uvjete

1. **Calculate the average price of products in each category**
   * **Query:** **SELECT KategorijaID, AVG(CijenaBezPDV) FROM Proizvod GROUP BY KategorijaID;**
   * **Solution:** Determines the average price of products within each category.
2. **List cities with more than 5 customers**
   * **Query:** **SELECT GradID, COUNT(\*) AS BrojKupaca FROM Kupac GROUP BY GradID HAVING BrojKupaca > 5;**
   * **Solution:** Identifies cities with more than 5 customers.
3. **Find the most popular product based on order quantity**
   * **Query:** **SELECT ProizvodID, SUM(Kolicina) AS UkupnaKolicina FROM Stavka GROUP BY ProizvodID ORDER BY UkupnaKolicina DESC LIMIT 1;**
   * **Solution:** Retrieves the product with the highest total order quantity.
4. **Display products not ordered in any invoice**
   * **Query:** **SELECT \* FROM Proizvod WHERE IDProizvod NOT IN (SELECT ProizvodID FROM Stavka);**
   * **Solution:** Lists products that have not been ordered in any invoice.
5. **Show the total sales amount for each city**
   * **Query:** **SELECT Grad.Naziv, SUM(Stavka.UkupnaCijena) AS UkupnaProdaja FROM Stavka JOIN Racun ON Stavka.RacunID = Racun.IDRacun JOIN Kupac ON Racun.KupacID = Kupac.IDKupac JOIN Grad ON Kupac.GradID = Grad.IDGrad GROUP BY Grad.Naziv;**
   * **Solution:** Calculates the total sales amount for each city.

# Upiti s podupitima i naprednim uvjetima

1. **List countries with no cities in the database**
   * **Query:** **SELECT \* FROM Drzava WHERE IDDrzava NOT IN (SELECT DISTINCT DrzavaID FROM Grad);**
   * **Solution:** Identifies countries without any cities listed in the database.
2. **Find the city with the highest number of orders**
   * **Query:** **SELECT Grad.Naziv, COUNT(Racun.IDRacun) AS BrojRacuna FROM Racun JOIN Kupac ON Racun.KupacID = Kupac.IDKupac JOIN Grad ON Kupac.GradID = Grad.IDGrad GROUP BY Grad.Naziv ORDER BY BrojRacuna DESC LIMIT 1;**
   * **Solution:** Determines the city with the highest number of orders.
3. **Show products with prices above the average price in their category**
   * **Query:** **SELECT \* FROM Proizvod WHERE CijenaBezPDV > (SELECT AVG(CijenaBezPDV) FROM Proizvod AS P WHERE P.KategorijaID = Proizvod.KategorijaID);**
   * **Solution:** Lists products priced above the average in their respective categories.
4. **Identify customers who have made purchases on more than one distinct date**
   * **Query:** **SELECT KupacID FROM Racun GROUP BY KupacID HAVING COUNT(DISTINCT DATE(DatumIzdavanja)) > 1;**
   * **Solution:** Finds customers who have made purchases on more than one distinct date.
5. **Calculate the total number of products sold for each product category**
   * **Query:** **SELECT Kategorija.Naziv, SUM(Stavka.Kolicina) AS UkupnoProdano FROM Stavka JOIN Proizvod ON Stavka.ProizvodID = Proizvod.IDProizvod JOIN Potkategorija ON Proizvod.PotkategorijaID = Potkategorija.IDPotkategorija JOIN Kategorija ON Potkategorija.KategorijaID = Kategorija.IDKategorija GROUP BY Kategorija.Naziv;**
   * **Solution:** Summarizes the total number of products sold in each product category.

# Napredna manipulacija podacima i analiza

1. **Find the month with the highest sales volume**
   * **Query:** **SELECT MONTH(DatumIzdavanja) AS Mjes ec, SUM(Stavka.Kolicina) AS UkupnaKolicina FROM Stavka JOIN Racun ON Stavka.RacunID = Racun.IDRacun GROUP BY MONTH(DatumIzdavanja) ORDER BY UkupnaKolicina DESC LIMIT 1;**
   * **Solution:** Determines the month with the highest total quantity of products sold.
2. **Show the difference in product quantities between the two best-selling products**
   * **Query:** **SELECT ABS(SUM(Kolicina) - (SELECT SUM(Kolicina) FROM Stavka GROUP BY ProizvodID ORDER BY SUM(Kolicina) DESC LIMIT 1, 1)) AS Razlika FROM Stavka GROUP BY ProizvodID ORDER BY SUM(Kolicina) DESC LIMIT 1;**
   * **Solution:** Calculates the difference in sold quantities between the top-selling product and the second best-selling product.
3. **List all products that have never been sold in the same invoice with Product ID 1**
   * **Query:** **SELECT Proizvod.Naziv FROM Proizvod WHERE IDProizvod NOT IN (SELECT ProizvodID FROM Stavka WHERE RacunID IN (SELECT RacunID FROM Stavka WHERE ProizvodID = 1));**
   * **Solution:** Identifies products that have never been included in an invoice with Product ID 1.
4. **Calculate the average sales amount per invoice for each salesperson**
   * **Query:** **SELECT KomercijalistID, AVG(Total) AS ProsječniIznosPoRacunu FROM (SELECT Racun.KomercijalistID, Racun.IDRacun, SUM(Stavka.UkupnaCijena) AS Total FROM Racun JOIN Stavka ON Racun.IDRacun = Stavka.RacunID GROUP BY Racun.IDRacun) AS Sales GROUP BY KomercijalistID;**
   * **Solution:** Determines the average total amount per invoice for each salesperson, calculated from the sum of item totals in each invoice.
5. **Find the country with the most diverse range of product categories in orders**
   * **Query:** **SELECT Drzava.Naziv, COUNT(DISTINCT KategorijaID) AS Raznolikost FROM Racun JOIN Kupac ON Racun.KupacID = Kupac.IDKupac JOIN Grad ON Kupac.GradID = Grad.IDGrad JOIN Drzava ON Grad.DrzavaID = Drzava.IDDrzava JOIN Stavka ON Racun.IDRacun = Stavka.RacunID JOIN Proizvod ON Stavka.ProizvodID = Proizvod.IDProizvod JOIN Potkategorija ON Proizvod.PotkategorijaID = Potkategorija.IDPotkategorija GROUP BY Drzava.Naziv ORDER BY Raznolikost DESC LIMIT 1;**
   * **Solution:** Identifies the country with the highest diversity of product categories based on orders.