#### 1. User

- user ID → username, email, password
- user ID is the superkey

### 2. Portfolio

- portfolio ID → user ID, portfolioName, creationDate, description
- portfolioID is the superkey.

### 3. Stock

- stock ID → tickerSymbol, companyName, sector, currentPrice, volume
- stock ID is the superkey

#### 4. Transaction

- transaction\_ID → portfolioStock\_ID, transactionDate, type, quantity, pricePerShare
- transaction ID is the superkey.

## 5. Dividend

- dividend ID → stock ID, paymentDate, amountPerShare
- dividend ID is the superkey.

### 6. CorporateAction

- corporateAction ID → stock ID, actionType, actionDate, details
- corporateAction ID is the superkey.

# 7. PortfolioStock (Associative Entity)

- portfolioStock ID → portfolio ID, stock ID, quantityOwned
- PortfolioStockID is the superkey.

## 8. Performance

- performance\_ID → portfolio\_ID, date, totalValue, unrealizedGainsLosses, realizedGainsLosses
- PerformanceID is the superkey.

Each table meets the requirements of BCNF, thus the schema based on the provided ERD is appropriately normalized to BCNF.

User(UserID, Username, Email, Password)

Portfolio(PortfolioID, UserID, PortfolioName, CreationDate, Description)

Stock(StockID, TickerSymbol, CompanyName, Sector, CurrentPrice, Volume)

Transaction(TransactionID, PortfolioStockID, TransactionDate, Type, Quantity, PricePerShare)

Dividend(DividendID, StockID, PaymentDate, AmountPerShare)

CorporateAction(ActionID, StockID, ActionType, ActionDate, Details)

PortfolioStock(PortfolioStockID, PortfolioID, StockID, QuantityOwned)

PortfolioPerformance(PerformanceID, PortfolioID, Date, TotalValue, UnrealizedGainsLosses, RealizedGainsLosses)