Swift Bar Chart Sample Code

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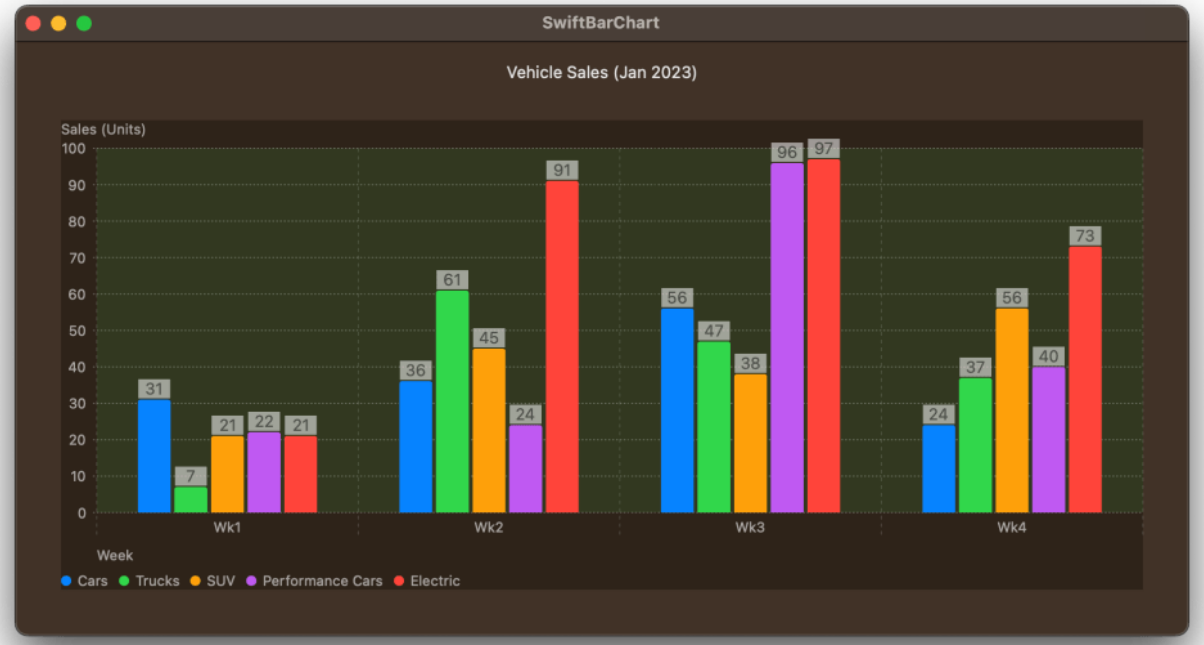

Swift Bar Chart

In this post we will create a simple UI using Swift UI to create a Bar Chart and then we will customize the below

- **Bar Width Ratio** – to maintain a constant ratio between the bar width and the gap between bars
- **Annotation** – Will add a custom text for displaying the value of the data corresponding to each bar. In this sample have created a text area that is vertically offset to appear above each bar.
- Chart Background Color
- Chart Plot Background Color
- Custom Chart Y Axis
- X Axis and Y Axis Label
- Color Scheme etc

```
//  ContentView.swift
//  SwiftBarChart
//  Created by Debasis Das on 7/12/23.

import SwiftUI
import Charts

struct ProductSalesData: Identifiable{
    var prodName:String
    var data:[(week:String, sale:Int)]
    var id: String{ prodName}
}

struct ContentView: View {

    let salesData:[ProductSalesData] = {
        let products = ["Cars","Trucks","SUV","Performance Cars","Electric"]
        let weeks = ["Wk1","Wk2","Wk3","Wk4"]

        var retData:[ProductSalesData] = []
        for product in products {
            var weeksData:[(week:String, sale:Int)] = []
            for week in weeks {
                let rec = (week:week,sale:Int.random(in: 0...100))
                weeksData.append(rec)
            }
            let prodRecord = ProductSalesData(prodName: product, data: weeksData)
            retData.append(prodRecord)
        }
        return retData
    }()

    var body: some View {
        VStack {
            Text("Vehicle Sales (Jan 2023)")
            Chart(salesData) { series in
                ForEach(series.data, id: \.week) { element in
                    BarMark(
                        x: .value("week", element.week),
                        y: .value("Sale", element.sale),
                        width:.ratio(0.90)
                    )
                    .foregroundStyle(by: .value("prodName", series.prodName))
                    .annotation(position: .overlay, alignment: .top) {
                        if series.data.count > 0{
                            if element.sale > 0{
                                Text("\(element.sale)")
                                    .frame(width: 25, height: 15, alignment: .center)
                                    .minimumScaleFactor(0.6)
                                    .foregroundColor(.black)
                                    .background(.white)
                                    .opacity(0.5)
```

```
                                    .offset(y:-20)
                                    .allowsTightening(true)
                                    .lineLimit(1)
                                }
                            }
                        }
                    }
                    .interpolationMethod(.catmullRom)
                    .position(by: .value("prodName", series.prodName))
                }
                .chartBackground { chartProxy in
                    Color.black.opacity(0.3)
                }
                .chartPlotStyle { chartContent in
                            chartContent
                                .background(Color.green.opacity(0.1))
                        }
                .chartYAxis{
                    AxisMarks(position: .leading, values: .automatic(desiredCount: 10)){
value in
                        AxisGridLine(centered: true, stroke: StrokeStyle(dash: [1, 2]))
                        AxisTick(centered: true, stroke: StrokeStyle(dash: [1, 2]))
                        AxisValueLabel()
                    }
                }
                .chartYAxisLabel("Sales (Units)")
                .chartXAxisLabel("Week")
                .padding(20)
                .preferredColorScheme(.dark)
            }
            .padding()
        }
}

struct ContentView_Previews: PreviewProvider {
    static var previews: some View {
        ContentView()
    }
}
```

You can also view the below charts

Swift Line Chart