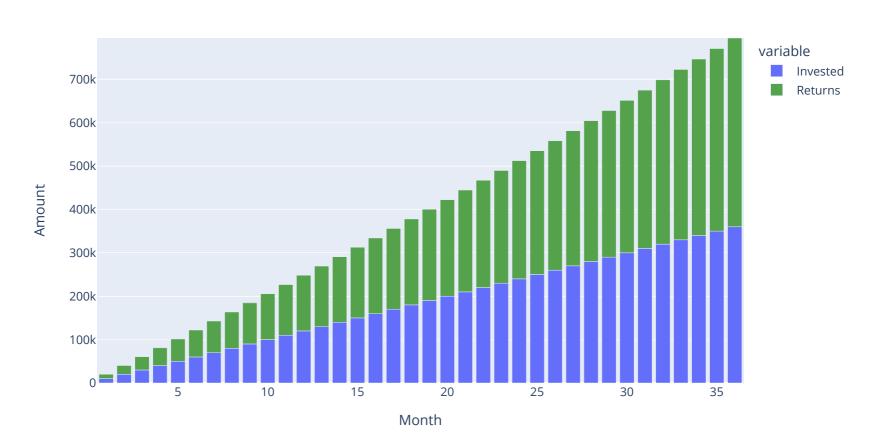
```
In [31]: from IPython.core.interactiveshell import InteractiveShell
         InteractiveShell.ast node interactivity = "all"
         import pandas as pd
         import numpy as np
         import matplotlib.pyplot as plt
         import seaborn as sns
         %matplotlib inline
         import locale
         import babel.numbers
         import chart studio.plotly as py
         import plotly.express as px
         from plotly.offline import download plotlyjs, iplot, init notebook mode, plot
         init notebook mode(connected=True)
         import cufflinks as cf
         cf.go offline()
         import plotly.graph_objects as go
         plt.rcParams['figure.dpi'] = 140
         plt.rcParams['savefig.dpi'] = 140
         sns.set(rc={"figure.dpi":160, 'savefig.dpi':160})
         amount = float(input("Enter the monthly SIP amount "))
         yearlyRate = float(input("Enter the yearly rate of return in % "))
         years = int(input("Enter the number of years "))
         monthlyRate = yearlyRate/12/100
         months = years * 12
         futureValue = amount * (((((1 + monthlyRate)**(months))-1) * (1 + monthlyRate))/monthlyRate
         futureValue = round(futureValue)
         print("The invested amount is", babel.numbers.format currency(amount*12*years, 'INR', locale='en IN'))
         print("The expected amount you will get is",babel.numbers.format currency(futureValue, 'INR', locale='en IN'))
         monthlyReturns = [amount * (1 + monthlyRate)]
         for i in range(12 * years - 1):
             temp = round(monthlyReturns[i], 2)
             monthlyReturns.append( round( ((temp + amount) * (1 + monthlyRate)), 2 ))
         investedAmount = [amount]
         for i in range(1, 12 * years):
             investedAmount.append(investedAmount[i-1] + amount)
         monthlyReturns Series = pd.Series(monthlyReturns)
         investedAmount Series = pd.Series(investedAmount)
         sip = pd.DataFrame({"Invested":investedAmount Series, "Returns":monthlyReturns Series})
         sip.index = pd.RangeIndex(1, years*12 +1,1)
         px.bar(data frame=sip,
                title="Magic of SIP | "+"Monthly = "+str(amount)+" | Yearly Rate = "+
                str(yearlyRate)+" | Years = "+str(years),
                range y=[0,futureValue + amount*12*years],
                color discrete sequence=[px.colors.qualitative.Plotly[0], px.colors.qualitative.T10[4]]).update layout(
             xaxis title="Month", yaxis title="Amount"
         fig = px.pie(values=[(sip.Returns.iloc[-1]/(sip.Returns.iloc[-1]+sip.Invested.iloc[-1]))*100,
                               (sip.Invested.iloc[-1]/(sip.Returns.iloc[-1]+sip.Invested.iloc[-1]))*100
                             ],title="Returns % vs Invested %", names=['Returns','Invested'],
                            color discrete sequence=[px.colors.qualitative.Plotly[0], px.colors.qualitative.T10[4]])
         fig.show()
         sip percentage = sip.copy()
         sip percentage.Returns = (sip.Returns/(sip.Returns+sip.Invested))*100
         sip percentage.Invested = (sip.Invested/(sip.Returns+sip.Invested))*100
         # px.bar(data frame=sip percentage, title="Magic of SIP | "+"Monthly = "+str(amount)+" | Yearly Rate = "+
                  str(yearlyRate)+" | Years = "+str(years)).update layout(
         #
               xaxis_title="Month", yaxis_title="Percentage"
```

Enter the monthly SIP amount 10000
Enter the yearly rate of return in % 12
Enter the number of years 3
The invested amount is ₹3,60,000.00
The expected amount you will get is ₹4,35,076.00

)

Magic of SIP | Monthly = 10000.0 | Yearly Rate = 12.0 | Years = 3



Returns % vs Invested %

