# India vs Australia Mastercard 2nd T-20I Analysis

In [1]:

```
import numpy as np
import pandas as pd
from matplotlib import pyplot as plt
from datetime import date
```

In [2]:

```
def match_day():
    from datetime import date
    date = date(2022, 9, 23)
    match_date = date
    print("Date of the match is:",match_date)
    print(" ")
    print("Mastercard T20I Series")
    print(" ")
    print("India vs Australia 2nd T20I")
    print(" ")
    toss_winner = "IND"
    toss_decision = "bowl"
    print("Toss: ",toss_winner,"won the toss and decided to",toss_decision)
    print(" ")
    Stadium = 'Vidarbha Cricket Association Stadium, Nagpur'
    print("Stadium: ",Stadium)
    print(" ")
    Umpires= 'KN Anantha Padmanabhan, Nitin Menon'
    print("Umpires: ",Umpires)
    print(" ")
    Third_Umpire = 'Virender Sharma'
    print("Third Umpire: ",Third_Umpire)
    print(" ")
    Match_Referee='Javagal Srinath'
    print("Match Referee: ",Match_Referee)

match_day()
```

Date of the match is: 2022-09-23

Mastercard T20I Series

India vs Australia 2nd T20I

Toss:  IND won the toss and decided to bowl

Stadium:  Vidarbha Cricket Association Stadium, Nagpur

Umpires:  KN Anantha Padmanabhan, Nitin Menon

Third Umpire:  Virender Sharma

Match Referee:  Javagal Srinath

# Australia Scorecard

In [3]:

```
print("Australia Playing XI:-\n")
playing_11=['Aaron Finch (c)','Cameron Green','Steven Smith','Glenn Maxwell','Daniel Sams',
            'Tim David','Matthew Wade (wk)','Pat Cummins','Sean Abbott','Adam Zampa',
                'Josh Hazlewood']

for i in playing_11:
        print(i)

print("\nSCORECARD")
print("*** Australia Batting ***")

player=['Aaron Finch','Cameron Green','Glenn Maxwell','Tim David','Matthew Wade','Steven Smith']
runs=[31,5,0,2,43,8]
balls=[15,4,1,3,20,5]
fours=[4,1,0,0,4,1]
sixes=[1,0,0,0,3,0]
strike_rate=[206.67,125,0.00,66.67,215,160]

aus={"Batting":player,"R":runs,"B":balls,"4s":fours,"6s":sixes,"S/R":strike_rate}
aus=pd.DataFrame(aus)
print(aus)

print("")
ytb=['Daniel Sams','Sean Abbott','Adam Zampa','Pat Cummins','Josh Hazlewood']
print("\nYet to bat:")
for i in ytb:
    print(i)
```

```python
#===================Bowling==================
print("\n***IND Bowlig***\n")
player=['Hardik Pandya','Axar Patel','Yuzvendra Chahal','Jasprit Bumrah','Harshal Patel']
overs=[1.0,2.0,1.0,2.0,2.0]
M=[0,0,0,0,0]
Runs=[10,13,12,23,32]
wickets=[0,2,0,1,0]
econ=[10.00,6.50,12.00,11.50,16.00]

ind_bowl={"Bowling":player,"O":overs,"M":M,"R":Runs,"W":wickets,"Econ":econ}
ind_bowl=pd.DataFrame(ind_bowl)
print(ind_bowl)
print("")

Buys=0
fours=sum(fours)
sixes=sum(sixes)

print("\nAustralia Total Fours:",fours)
print("\nAustralia Total Sixes:",sixes)
print("\nExtras:",sum(Runs)-sum(runs)+Buys)
Aus=sum(Runs)+Buys
print("\nTotal runs:",Aus)
```

```
Australia Playing XI:-

Aaron Finch (c)
Cameron Green
```

```
Steven Smith
Glenn Maxwell
Daniel Sams
Tim David
Matthew Wade (wk)
Pat Cummins
Sean Abbott
Adam Zampa
Josh Hazlewood

SCORECARD
*** Australia Batting ***
         Batting   R   B  4s  6s     S/R
0    Aaron Finch  31  15   4   1  206.67
1  Cameron Green   5   4   1   0  125.00
2  Glenn Maxwell   0   1   0   0    0.00
3      Tim David   2   3   0   0   66.67
4   Matthew Wade  43  20   4   3  215.00
5   Steven Smith   8   5   1   0  160.00


Yet to bat:
Daniel Sams
Sean Abbott
Adam Zampa
Pat Cummins
Josh Hazlewood

***IND Bowlig***

            Bowling    O  M   R  W  Econ
0     Hardik Pandya  1.0  0  10  0  10.0
1        Axar Patel  2.0  0  13  2   6.5
2  Yuzvendra Chahal  1.0  0  12  0  12.0
3    Jasprit Bumrah  2.0  0  23  1  11.5
4     Harshal Patel  2.0  0  32  0  16.0


Australia Total Fours: 10

Australia Total Sixes: 4
```

```
Extras: 1

Total runs: 90
```

In [4]:

```
for i in aus['Batting']:
    print(i)
```

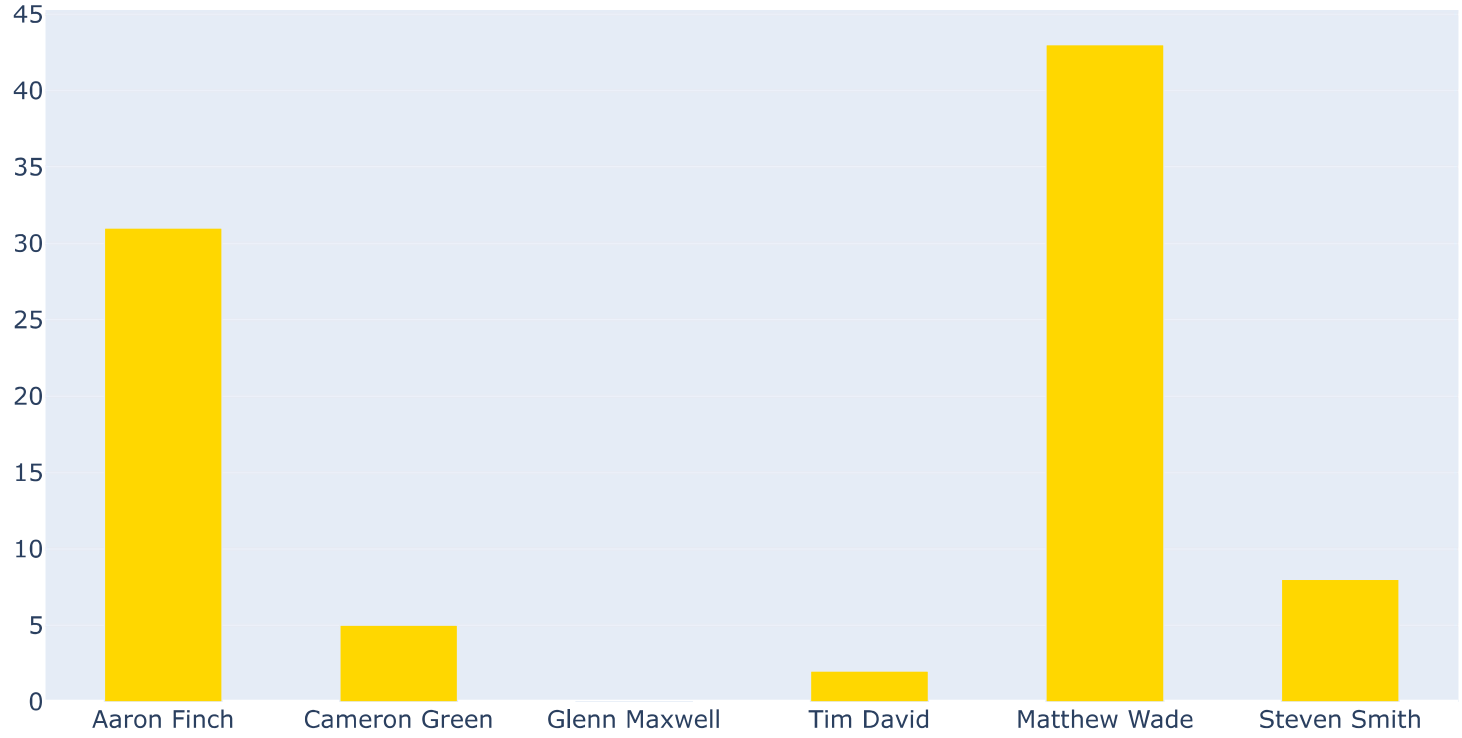
```
Aaron Finch
Cameron Green
Glenn Maxwell
Tim David
Matthew Wade
Steven Smith
```

In [5]:

```
import plotly.graph_objects as go

labels = aus['Batting']
values = aus['R']
fig = go.Figure()
fig.add_trace(go.Bar(
    x=labels,
    y=values,
    width=[0.5, 0.5, 0.5, 0.5, 0.5,0.5,0.5,0.5], # customize width here
    name='Primary Product',
    marker_color='gold'
))

# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)

fig.update_layout(title_text='Runs Scored by Australian players')

fig.show()
```

Runs Scored by Australian players

Runs Scored by Australian players



## Top 3 scorers of Australia

In [6]:

```
#nlargest
aus.nlargest(3,'R')
```

|  | Batting | R | B | 4s | 6s | S/R |
|---|---|---|---|---|---|---|
| **4** | Matthew Wade | 43 | 20 | 4 | 3 | 215.00 |
| **0** | Aaron Finch | 31 | 15 | 4 | 1 | 206.67 |
| **5** | Steven Smith | 8 | 5 | 1 | 0 | 160.00 |

## Top 3 wicket takers of India

In [7]:

```
#nlargest
ind_bowl.nlargest(3,'W')
```

|  | Bowling | O | M | R | W | Econ |
|---|---|---|---|---|---|---|
| **1** | Axar Patel | 2.0 | 0 | 13 | 2 | 6.5 |
| **3** | Jasprit Bumrah | 2.0 | 0 | 23 | 1 | 11.5 |
| **0** | Hardik Pandya | 1.0 | 0 | 10 | 0 | 10.0 |

# India Bowling DataFrame

In [8]:

```
#Create Empty Lists
Over = []
Bowler = []
Runs = []
Wickets = []
Batsman = []
Score = []
#Date = []
```

In [9]:

```
#Create a function to add the records to the lists and organize the data
def add_ind_bowling(over, bowler, runs, wickets, batsman, score):
    Over.append(over)
    Bowler.append(bowler)
    Runs.append(runs)
    Wickets.append(wickets)
    Batsman.append(batsman)
    Score.append(score)
    #Date.append(date)
```

In [10]:

```
#Main program
option = -1 #This will be the users option or choice or input from user

while (option != 0):
    #Create the option menu
    print('Welcome to India vs Australia Mastercard T-20I Series:')
    print('1. Add India Bowling Stats')
    print('2. Show And Save The Expense Report')
    print('0. Exit')

    option = int(input('Choose an option:\n'))
    print()

    #Check for the users choice or option or input
    if option == 0:
        print('Exiting the program')
        break

    elif option == 1:
        print('Adding India Bowling Stats')

    elif option == 2:
          #Create a data frame and add the expenses
        bowling_report = pd.DataFrame()
        bowling_report['Over'] = Over
        bowling_report['Bowler'] = Bowler
        bowling_report['Runs'] = Runs
        bowling_report['Wickets'] = Wickets
        bowling_report['Batsman'] = Batsman
        bowling_report['Score'] = Score
        #bowling_report['Date'] = Date

        #Save the expense report
        bowling_report.to_csv('ind_bowling.csv')

        #Show the expense report
        print(bowling_report)

    else:
        print('You chose an incorrect option. Please choose 0,1,2,3 or 4')

        #Allow the user to enter the stats
    if option == 1 :
        over=int(input("Enter over number:\n "))
        bowler=str(input("Enter bowler name:\n "))
        runs=int(input("How many runs scored this over:\n "))
        wickets=int(input("How many wickets fall this over:\n "))
        batsman=str(input("Which batsman out this over:\n "))
        score=int(input("What is current over score:\n "))
        #date = date.today()
        add_ind_bowling(over, bowler, runs, wickets, batsman, score)

    #Print a new line
    print()
```

```
What is current over score:
 90
```

```
Welcome to India vs Australia Mastercard T-20I Series:
1. Add India Bowling Stats
2. Show And Save The Expense Report
0. Exit
Choose an option:
2

   Over           Bowler  Runs  Wickets                     Batsman  Score
0     1    Hardik Pandya    10        0                                 10
1     2       Axar Patel     9        2  Cameron Green, Glenn Maxwell     19
2     3  Yuzvendra Chahal   12        0                                 31
3     4       Axar Patel     4        1                   Tim David     35
4     5    Jasprit Bumrah   11        1                 Aaron Finch     46
5     6    Harshal Patel    13        0                                 59
6     7    Jasprit Bumrah   12        0                                 71
7     8    Harshal Patel    19        1                Steven Smith     90

Welcome to India vs Australia Mastercard T-20I Series:
1. Add India Bowling Stats
2. Show And Save The Expense Report
0. Exit
Choose an option:
```

```
In [11]: bowling_report.describe()
```

| | Over | Runs | Wickets | Score |
|---|---|---|---|---|
| **count** | 8.00000 | 8.00000 | 8.000000 | 8.000000 |
| **mean** | 4.50000 | 11.25000 | 0.625000 | 45.125000 |
| **std** | 2.44949 | 4.20034 | 0.744024 | 26.978497 |
| **min** | 1.00000 | 4.00000 | 0.000000 | 10.000000 |
| **25%** | 2.75000 | 9.75000 | 0.000000 | 28.000000 |
| **50%** | 4.50000 | 11.50000 | 0.500000 | 40.500000 |
| **75%** | 6.25000 | 12.25000 | 1.000000 | 62.000000 |
| **max** | 8.00000 | 19.00000 | 2.000000 | 90.000000 |

In [12]:

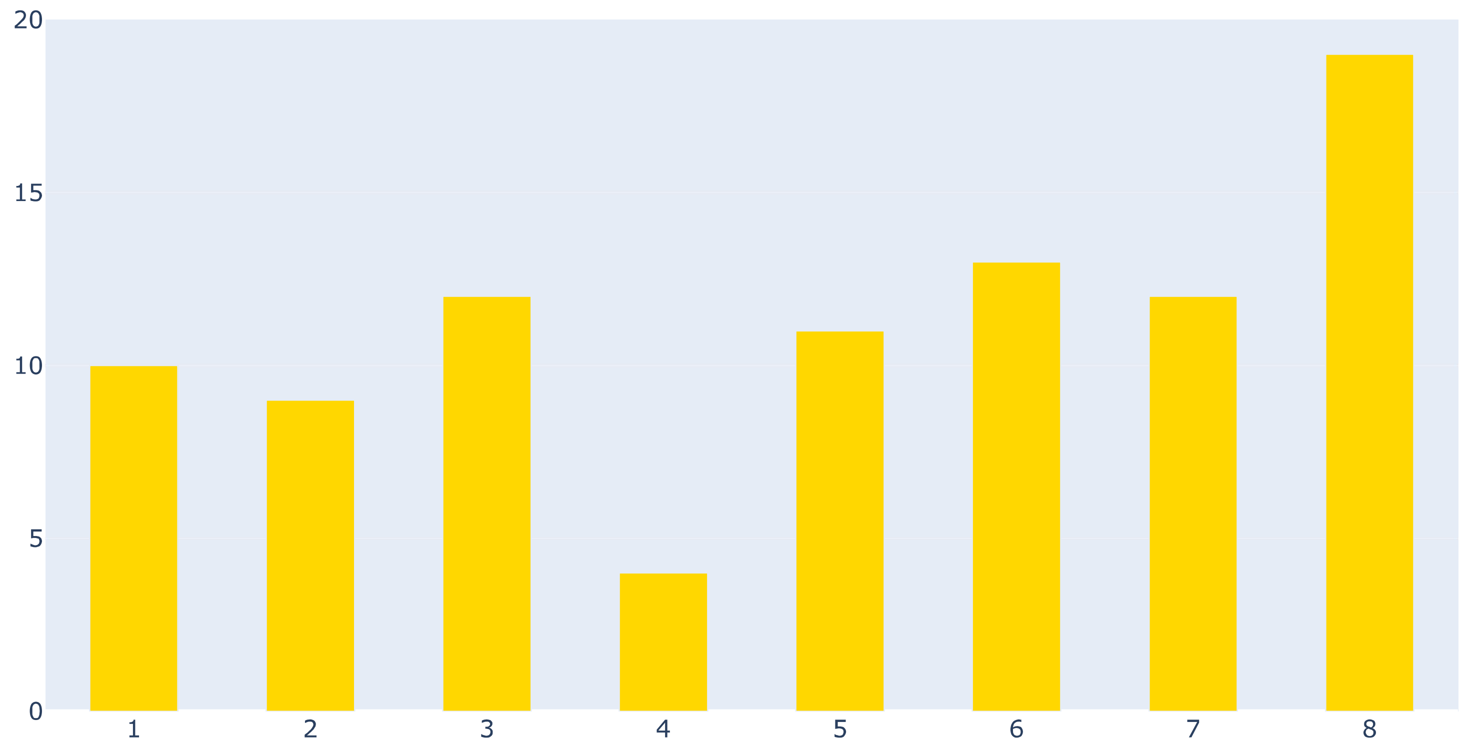
```
for i in Score:
    print(i)
```

```
10
19
31
35
46
59
71
90
```

In [13]:

```
import plotly.graph_objects as go

labels = Over
values = Runs
fig = go.Figure()
fig.add_trace(go.Bar(
    x=labels,
    y=values,
    width=[0.5, 0.5, 0.5, 0.5, 0.5,0.5,0.5,0.5], # customize width here
    name='Primary Product',
    marker_color='gold'
))



# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)


fig.update_layout(title_text='Runs Scored by Australia vs Over')

fig.show()
```

Runs Scored by Australia vs Over



which Bowler Bowled which over

In [14]:

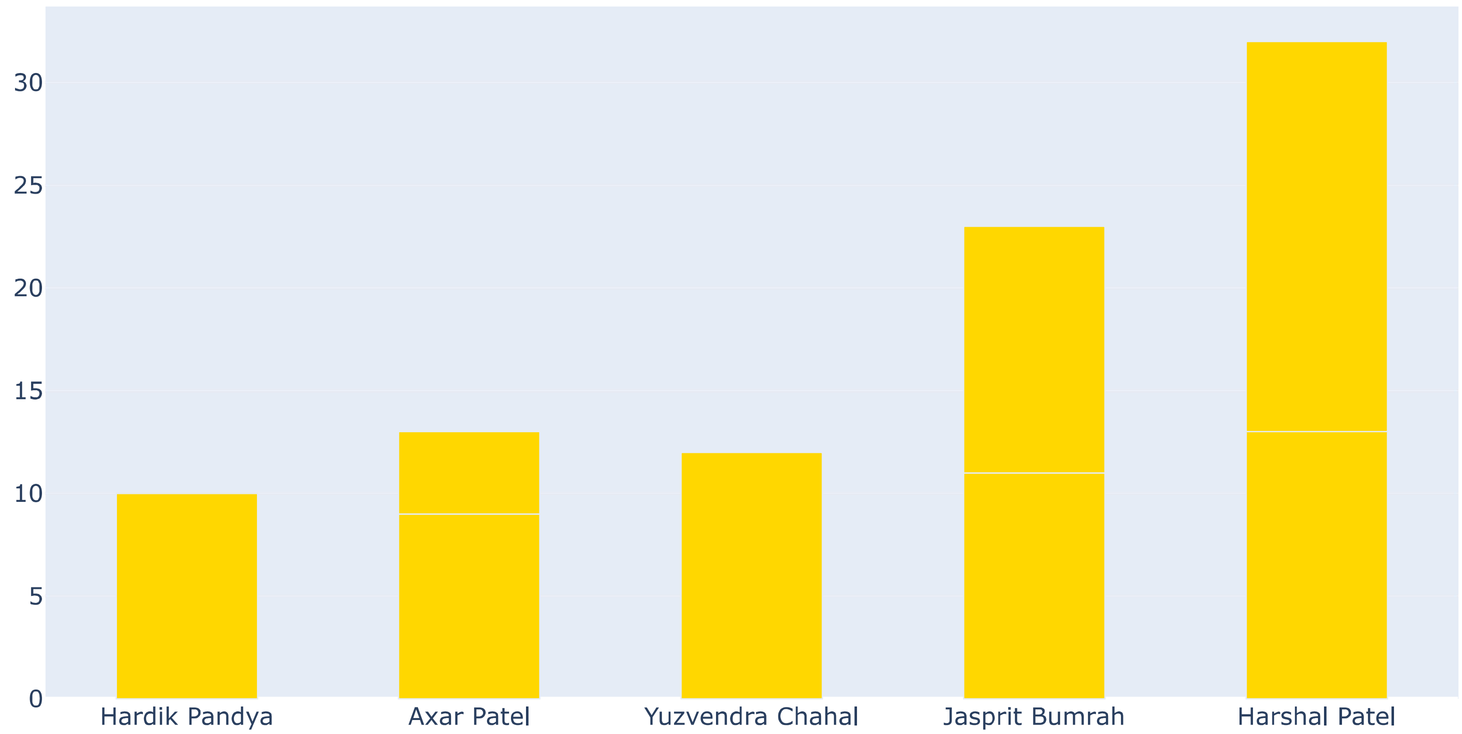
```
pd.crosstab(bowling_report.Over,bowling_report.Bowler)
```

| Bowler | Axar Patel | Hardik Pandya | Harshal Patel | Jasprit Bumrah | Yuzvendra Chahal |
|---|---|---|---|---|---|
| Over | | | | | |
| **1** | 0 | 1 | 0 | 0 | 0 |
| **2** | 1 | 0 | 0 | 0 | 0 |
| **3** | 0 | 0 | 0 | 0 | 1 |
| **4** | 1 | 0 | 0 | 0 | 0 |
| **5** | 0 | 0 | 0 | 1 | 0 |
| **6** | 0 | 0 | 1 | 0 | 0 |
| **7** | 0 | 0 | 0 | 1 | 0 |
| **8** | 0 | 0 | 1 | 0 | 0 |

In [15]:

```
import plotly.graph_objects as go

labels = Bowler
values = Runs
fig = go.Figure()
fig.add_trace(go.Bar(
    x=labels,
    y=values,
    width=[0.5, 0.5, 0.5, 0.5, 0.5,0.5,0.5,0.5], # customize width here
    name='Primary Product',
    marker_color='gold'
))

# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)

fig.update_layout(title_text='Runs Spend by Indian bowlers')

fig.show()
```

Runs Spend by Indian bowlers



## Which Batsman out which over

In [16]:

```
pd.crosstab(bowling_report.Over,bowling_report.Batsman)
```

| Batsman | | Aaron Finch | Cameron Green, Glenn Maxwell | Steven Smith | Tim David |
|---|---|---|---|---|---|
| **Over** | | | | | |
| **1** | 1 | 0 | 0 | 0 | 0 |
| **2** | 0 | 0 | 1 | 0 | 0 |
| **3** | 1 | 0 | 0 | 0 | 0 |
| **4** | 0 | 0 | 0 | 0 | 1 |
| **5** | 0 | 1 | 0 | 0 | 0 |
| **6** | 1 | 0 | 0 | 0 | 0 |
| **7** | 1 | 0 | 0 | 0 | 0 |
| **8** | 0 | 0 | 0 | 1 | 0 |

In [17]:

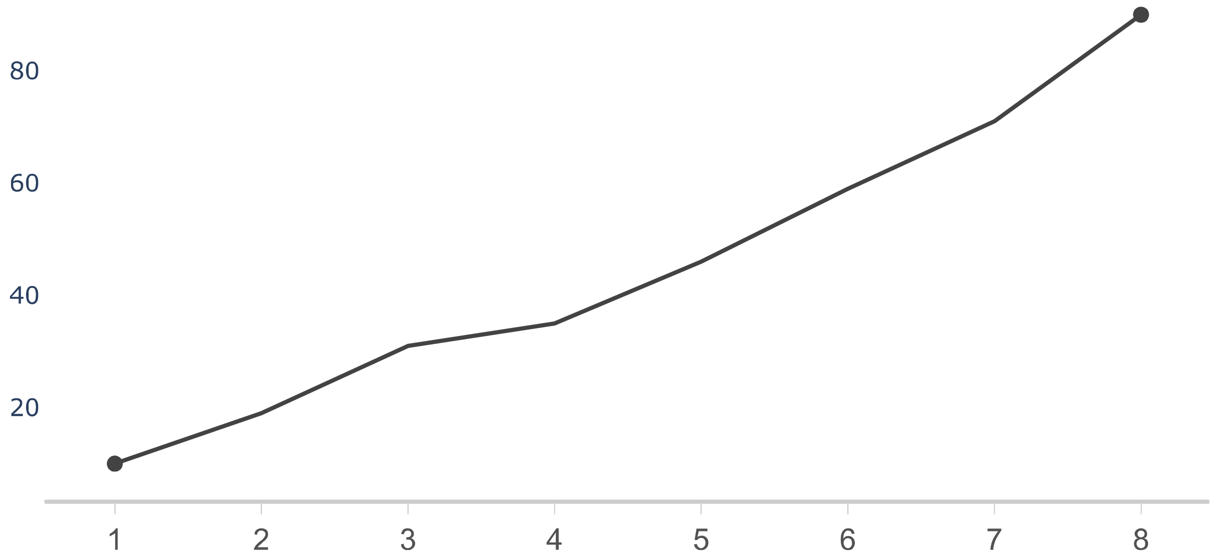
```
pd.crosstab(bowling_report.Batsman,bowling_report.Bowler)
```

| Bowler | Axar Patel | Hardik Pandya | Harshal Patel | Jasprit Bumrah | Yuzvendra Chahal |
|---|---|---|---|---|---|
| **Batsman** | | | | | |
| | 0 | 1 | 1 | 1 | 1 |
| **Aaron Finch** | 0 | 0 | 0 | 1 | 0 |
| **Cameron Green, Glenn Maxwell** | 1 | 0 | 0 | 0 | 0 |
| **Steven Smith** | 0 | 0 | 1 | 0 | 0 |
| **Tim David** | 1 | 0 | 0 | 0 | 0 |

In [18]:

```
import plotly.graph_objects as go
import numpy as np

title = 'Main Source for News'
labels = ['Australia']
colors = ['rgb(67,67,67)']

mode_size = [8]
line_size = [2]

x_data = np.vstack((np.arange(1, 9),)*1)

y_data = np.array([[10,19,31,35,46,59,71,90]])

fig = go.Figure()

for i in range(0, 1):
    fig.add_trace(go.Scatter(x=x_data[i], y=y_data[i], mode='lines',
        name=labels[i],
        line=dict(color=colors[i], width=line_size[i]),
        connectgaps=True,
    ))

    # endpoints
    fig.add_trace(go.Scatter(
        x=[x_data[i][0], x_data[i][-1]],
        y=[y_data[i][0], y_data[i][-1]],
        mode='markers',
        marker=dict(color=colors[i], size=mode_size[i])
    ))

fig.update_layout(
    xaxis=dict(
        showline=True,
        showgrid=True,
        showticklabels=True,
        linecolor='rgb(204, 204, 204)',
        linewidth=2,
        ticks='outside',
        tickfont=dict(
            family='Arial',
            size=15,
            color='rgb(82, 82, 82)',
        ),
    ),
    yaxis=dict(
        showgrid=True,
        zeroline=True,
        showline=True,
        showticklabels=True,
    ),
    autosize=False,
    margin=dict(
        autoexpand=False,
        l=100,
        r=20,
        t=110,
    ),
    showlegend=True,
    plot_bgcolor='white'
)

annotations = []
# Title
annotations.append(dict(xref='paper', yref='paper', x=0.0, y=1.05,
                              xanchor='left', yanchor='bottom',
                              text='Australia Scorecard',
                              font=dict(family='Arial',
                                        size=24,
                                        color='rgb(37,37,37)'),
                              showarrow=False))
# Source
annotations.append(dict(xref='paper', yref='paper', x=0.5, y=-0.1,
                              xanchor='center', yanchor='top',
                              text='Source: Cricket & ' +
                                   'Storytelling with data Over vs Runs',
                              font=dict(family='Arial',
                                        size=14,
                                        color='rgb(150,150,150)'),
                              showarrow=False))

fig.update_layout(annotations=annotations)

fig.show()
```

## Australia Scorecard



Source: Cricket & Storytelling with data Over vs Runs

## India Scorecard

In [19]:

```
print("India Playing XI:-\n")
playing_11=['KL Rahul','Rohit Sharma (c)','Virat Kohli','Suryakumar Yadav','Hardik Pandya','Rishabh Pant(w)
            'Axar Patel','Dinesh Karthik','Harshal Patel','Jasprit Bumrah','Yuzvendra Chahal']

for i in playing_11:
        print(i)

print("\nSCORECARD")
print("*** India Batting ***")

player=['KL Rahul','Rohit Sharma (c)','Virat Kohli','Suryakumar Yadav','Hardik Pandya','Dinesh Karthik',]

runs=[10,46,11,0,9,10]
balls=[6,20,6,1,9,2]
fours=[0,4,2,0,1,1]
sixes=[1,4,0,0,0,1]
strike_rate=[166.67,230,183.33,0.00,100,500]

ind={"Batting":player,"R":runs,"B":balls,"4s":fours,"6s":sixes,"S/R":strike_rate}
ind=pd.DataFrame(ind)
print(ind)

print("")
ytb=['Rishabh Pant(w)','Axar Patel','Dinesh Karthik','Harshal Patel','Jasprit Bumrah','Yuzvendra Chahal']
print("\nYet to bat:")
for i in ytb:
    print(i)
```

```
#====================Bowling===================
print("\n***AUS Bowlig***\n")
player=['Sean Abbott','Pat Cummins','Adam Zampa','Daniel Sams','Josh Hazlewood']
overs=[1.0,2.0,2.0,1.2,1.0]
M=[0,0,0,0,0]
Runs=[11,23,16,20,20]
wickets=[0,1,3,0,0]
econ=[11.00,11.50,8.00,15.00,20.00]

aus_bowl={"Bowling":player,"O":overs,"M":M,"R":Runs,"W":wickets,"Econ":econ}
aus_bowl=pd.DataFrame(aus_bowl)
print(aus_bowl)
print("")

Buys=2
fours=sum(fours)
sixes=sum(sixes)

print("\nIndia Total Fours:",fours)
print("\nIndia Total Sixes:",sixes)
print("\nExtras:",sum(Runs)-sum(runs)+Buys)
Ind=sum(Runs)+Buys
print("\nTotal runs:",Ind)
```

```
India Playing XI:-

KL Rahul
Rohit Sharma (c)
```

```
Virat Kohli
Suryakumar Yadav
Hardik Pandya
Rishabh Pant(w)Axar Patel
Dinesh Karthik
Harshal Patel
Jasprit Bumrah
Yuzvendra Chahal

SCORECARD
*** India Batting ***
            Batting   R   B  4s  6s     S/R
0          KL Rahul  10   6   0   1  166.67
1  Rohit Sharma (c)  46  20   4   4  230.00
2       Virat Kohli  11   6   2   0  183.33
3  Suryakumar Yadav   0   1   0   0    0.00
4     Hardik Pandya   9   9   1   0  100.00
5    Dinesh Karthik  10   2   1   1  500.00


Yet to bat:
Rishabh Pant(w)
Axar Patel
Dinesh Karthik
Harshal Patel
Jasprit Bumrah
Yuzvendra Chahal

***AUS Bowlig***

          Bowling    O  M   R  W  Econ
0     Sean Abbott  1.0  0  11  0  11.0
1     Pat Cummins  2.0  0  23  1  11.5
2      Adam Zampa  2.0  0  16  3   8.0
3     Daniel Sams  1.2  0  20  0  15.0
4  Josh Hazlewood  1.0  0  20  0  20.0


India Total Fours: 8

India Total Sixes: 6
```

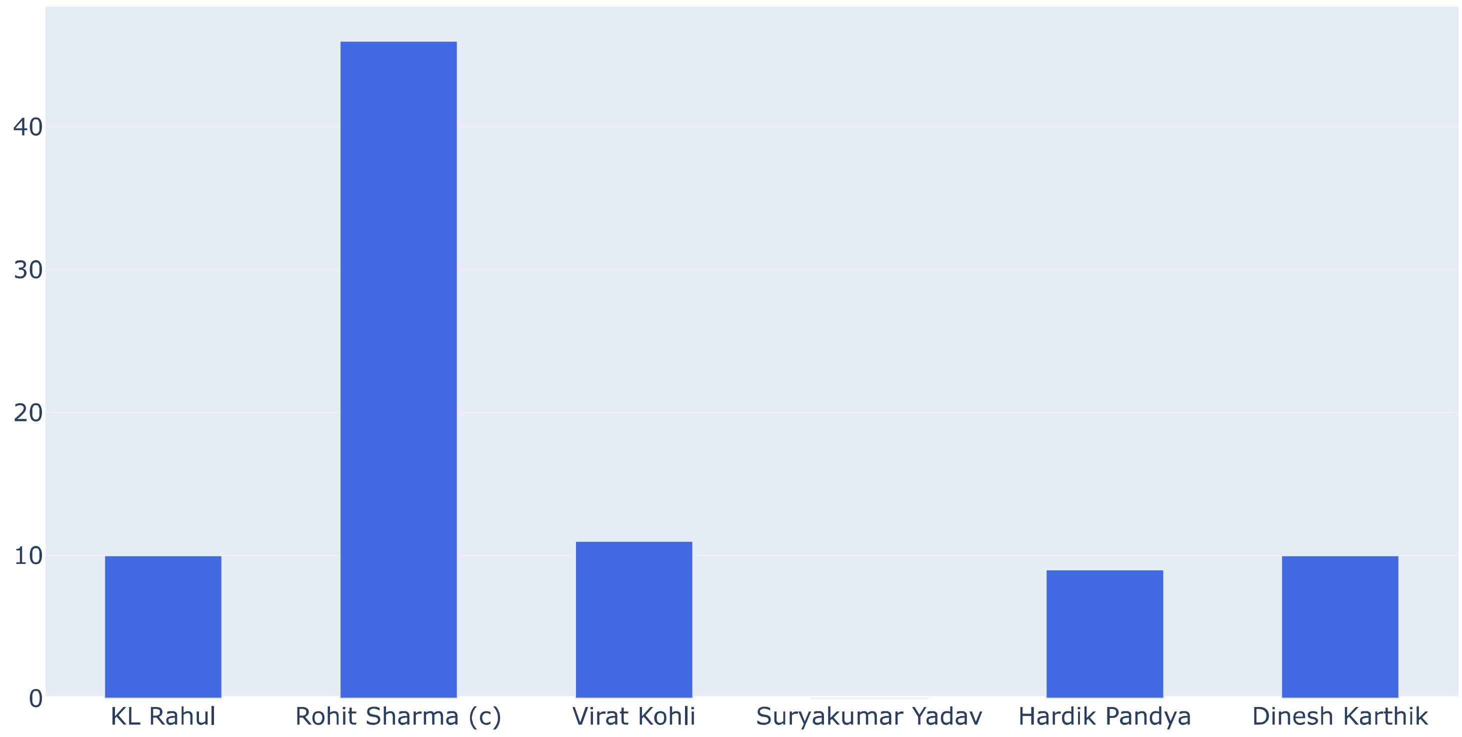
Extras: 6

Total runs: 92

In [20]:

```
labels = ind['Batting']
values = ind['R']
fig = go.Figure()

fig.add_trace(go.Bar(
    x=labels,
    y=values,
    width=[0.5, 0.5, 0.5, 0.5, 0.5,0.5,0.5,0.5], # customize width here
    name='Primary Product',
    marker_color='royalblue'
))



# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)

fig.update_layout(title_text='Runs Scored by Indian players')

fig.show()
```

Runs Scored by Indian players



## Top 3 scorers of India

In [21]:

```
#nlargest
ind.nlargest(3,'R')
```

|   | Batting | R | B | 4s | 6s | S/R |
|---|---|---|---|---|---|---|
| **1** | Rohit Sharma (c) | 46 | 20 | 4 | 4 | 230.00 |
| **2** | Virat Kohli | 11 | 6 | 2 | 0 | 183.33 |
| **0** | KL Rahul | 10 | 6 | 0 | 1 | 166.67 |

## Top 3 wicket takers of Australia

In [22]:

```
#nlargest
aus_bowl.nlargest(3,'W')
```

|   | Bowling | O | M | R | W | Econ |
|---|---|---|---|---|---|---|
| **2** | Adam Zampa | 2.0 | 0 | 16 | 3 | 8.0 |
| **1** | Pat Cummins | 2.0 | 0 | 23 | 1 | 11.5 |
| **0** | Sean Abbott | 1.0 | 0 | 11 | 0 | 11.0 |

# Australia Bowling DataFrame

In [23]:

```
#Create Empty Lists
Over = []
Bowler = []
Runs = []
Wickets = []
Batsman = []
Score = []
```

In [24]:

```
#Create a function to add the expenses to the lists and organize the data
def add_aus_bowling(over, bowler, runs, wickets, batsman, score):
    Over.append(over)
    Bowler.append(bowler)
    Runs.append(runs)
    Wickets.append(wickets)
    Batsman.append(batsman)
    Score.append(score)
```

In [25]:

```
#Main program
option = -1 #This will be the users option or choice or input from user

while (option != 0):
    #Create the option menu
    print('Welcome to India vs Australia Mastercard T-20I Series:')
    print('1. Add Australia Bowling Stats')
    print('2. Show And Save The Expense Report')
    print('0. Exit')

    option = int(input('Choose an option:\n'))
    print()

    #Check for the users choice or option or input
    if option == 0:
        print('Exiting the program')
        break

    elif option == 1:
        print('Adding Australia Bowling Stats')

    elif option == 2:
          #Create a data frame and add the expenses
        bowling_report = pd.DataFrame()
        bowling_report['Over'] = Over
        bowling_report['Bowler'] = Bowler
        bowling_report['Runs'] = Runs
        bowling_report['Wickets'] = Wickets
    bowling_report['Batsman'] = Batsman
    bowling_report['Score'] = Score
    #bowling_report['Date'] = Date

    #Save the expense report
    bowling_report.to_csv('aus_bowling.csv')

    #Show the expense report
    print(bowling_report)

else:
    print('You chose an incorrect option. Please choose 0,1 or 2')

    #Allow the user to enter the stats
if option == 1 :
    over=int(input("Enter over number:\n "))
    bowler=str(input("Enter bowler name:\n "))
    runs=int(input("How many runs scored this over:\n "))
    wickets=int(input("How many wickets fall this over:\n "))
    batsman=str(input("Which batsman out this over:\n "))
    score=int(input("What is current over score:\n "))
    #date = date.today()
    add_aus_bowling(over, bowler, runs, wickets, batsman, score)

#Print a new line
print()
```

```
Welcome to India vs Australia Mastercard T-20I Series:
1. Add Australia Bowling Stats
2. Show And Save The Expense Report
0. Exit
Choose an option:
2

   Over          Bowler  Runs  Wickets                        Batsman  Score
0     1  Josh Hazlewood    20        0                                    20
1     2     Pat Cummins    10        0                                    30
2     3      Adam Zampa    10        1                       KL Rahul     40
3     4     Daniel Sams    11        0                                    51
4     5      Adam Zampa     7        2  Virat Kohli, Suryakumar Yadav     58
5     6     Sean Abbott    11        0                                    69
6     7     Pat Cummins    13        1                   Hardik Pandya     82
7     8     Daniel Sams    10        0                                    92

Welcome to India vs Australia Mastercard T-20I Series:
1. Add Australia Bowling Stats
2. Show And Save The Expense Report
0. Exit
Choose an option:
```

In [26]:

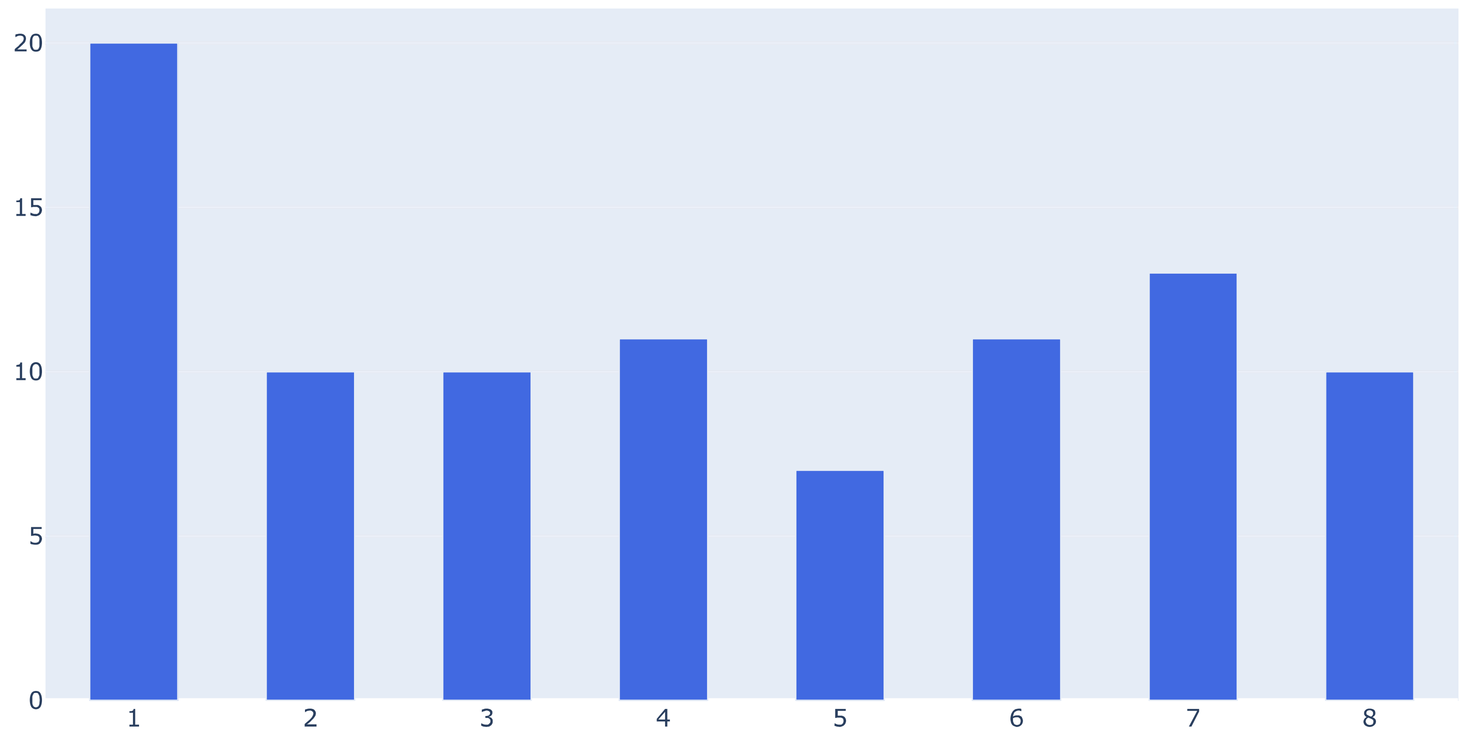
```
bowling_report.describe()
```

| | Over | Runs | Wickets | Score |
|---|---|---|---|---|
| **count** | 8.00000 | 8.000000 | 8.000000 | 8.000000 |
| **mean** | 4.50000 | 11.500000 | 0.500000 | 55.250000 |
| **std** | 2.44949 | 3.817254 | 0.755929 | 25.052801 |
| **min** | 1.00000 | 7.000000 | 0.000000 | 20.000000 |
| **25%** | 2.75000 | 10.000000 | 0.000000 | 37.500000 |
| **50%** | 4.50000 | 10.500000 | 0.000000 | 54.500000 |
| **75%** | 6.25000 | 11.500000 | 1.000000 | 72.250000 |
| **max** | 8.00000 | 20.000000 | 2.000000 | 92.000000 |

In [27]:

```
import plotly.graph_objects as go

labels = Over
values = Runs
fig = go.Figure()
fig.add_trace(go.Bar(
    x=labels,
    y=values,
    width=[0.5, 0.5, 0.5, 0.5, 0.5,0.5,0.5,0.5], # customize width here
    name='Primary Product',
    marker_color='royalblue'
))

# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)

fig.update_layout(title_text='Runs Scored by India vs Over')

fig.show()
```

Runs Scored by India vs Over



In [28]:

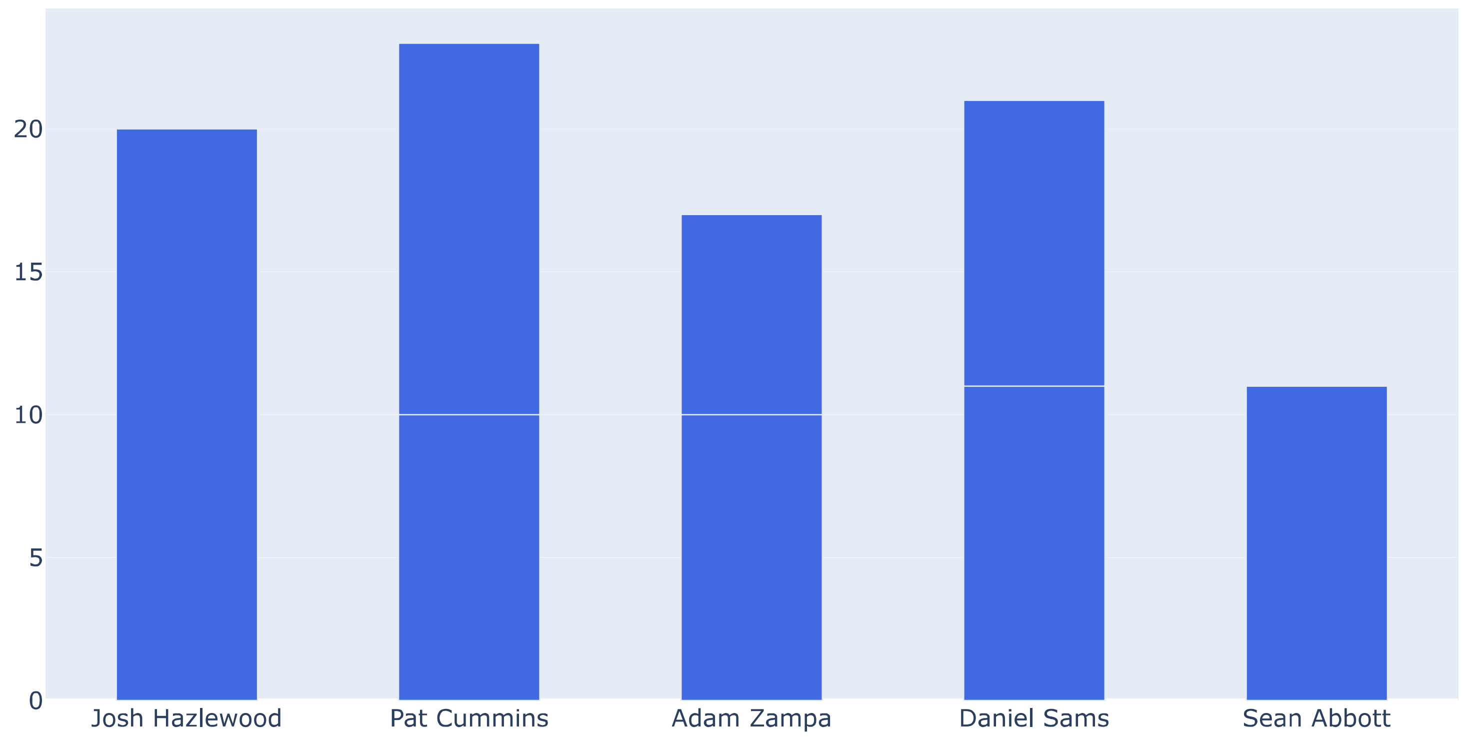
```
pd.crosstab(bowling_report.Over,bowling_report.Bowler)
```

| Bowler | Adam Zampa | Daniel Sams | Josh Hazlewood | Pat Cummins | Sean Abbott |
|---|---|---|---|---|---|
| Over | | | | | |
| **1** | 0 | 0 | 1 | 0 | 0 |
| **2** | 0 | 0 | 0 | 1 | 0 |
| **3** | 1 | 0 | 0 | 0 | 0 |
| **4** | 0 | 1 | 0 | 0 | 0 |
| **5** | 1 | 0 | 0 | 0 | 0 |
| **6** | 0 | 0 | 0 | 0 | 1 |
| **7** | 0 | 0 | 0 | 1 | 0 |
| **8** | 0 | 1 | 0 | 0 | 0 |

In [29]:

```
import plotly.graph_objects as go

labels = Bowler
values = Runs
fig = go.Figure()
fig.add_trace(go.Bar(
    x=labels,
    y=values,
    width=[0.5, 0.5, 0.5, 0.5, 0.5,0.5,0.5,0.5], # customize width here
    name='Primary Product',
    marker_color='royalblue'
))


# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)

fig.update_layout(title_text='Runs Spend by Australia bowlers')

fig.show()
```

Runs Spend by Australia bowlers



## which Bowler Bowled which over

In [30]:

```
pd.crosstab(bowling_report.Over,bowling_report.Batsman)
```

| Batsman |  | Hardik Pandya | KL Rahul | Virat Kohli, Suryakumar Yadav |
|---|---|---|---|---|
| **Over** |  |  |  |  |
| **1** | 1 | 0 | 0 | 0 |
| **2** | 1 | 0 | 0 | 0 |
| **3** | 0 | 0 | 1 | 0 |
| **4** | 1 | 0 | 0 | 0 |
| **5** | 0 | 0 | 0 | 1 |
| **6** | 1 | 0 | 0 | 0 |
| **7** | 0 | 1 | 0 | 0 |
| **8** | 1 | 0 | 0 | 0 |

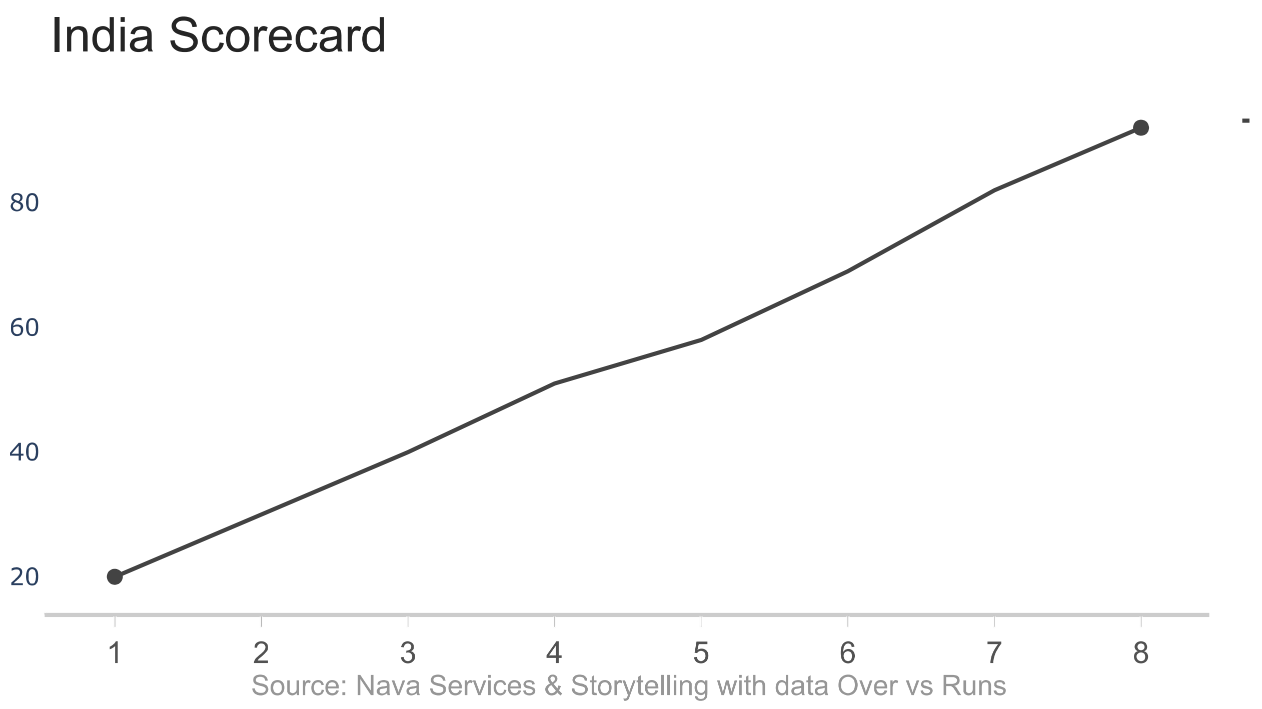
In [31]:

```
pd.crosstab(bowling_report.Batsman,bowling_report.Bowler)
```

| Bowler | Adam Zampa | Daniel Sams | Josh Hazlewood | Pat Cummins | Sean Abbott |
|---|---|---|---|---|---|
| **Batsman** |  |  |  |  |  |
|  | 0 | 2 | 1 | 1 | 1 |
| **Hardik Pandya** | 0 | 0 | 0 | 1 | 0 |
| **KL Rahul** | 1 | 0 | 0 | 0 | 0 |
| **Virat Kohli, Suryakumar Yadav** | 1 | 0 | 0 | 0 | 0 |

In [32]:

```
import plotly.graph_objects as go
import numpy as np

title = 'Main Source for News'
labels = ['India']
colors = ['rgb(67,67,67)']

mode_size = [8]
line_size = [2]

x_data = np.vstack((np.arange(1, 9),)*2)

y_data = np.array([[20,30,40,51,58,69,82,92]])

fig = go.Figure()

for i in range(0, 1):
    fig.add_trace(go.Scatter(x=x_data[i], y=y_data[i], mode='lines',
        name=labels[i],
        line=dict(color=colors[i], width=line_size[i]),
        connectgaps=True,
    ))

    # endpoints
    fig.add_trace(go.Scatter(
        x=[x_data[i][0], x_data[i][-1]],
        y=[y_data[i][0], y_data[i][-1]],
        mode='markers',
        marker=dict(color=colors[i], size=mode_size[i])
    ))

fig.update_layout(
    xaxis=dict(
        showline=True,
        showgrid=True,
        showticklabels=True,
        linecolor='rgb(204, 204, 204)',
        linewidth=2,
        ticks='outside',
        tickfont=dict(
            family='Arial',
            size=15,
            color='rgb(82, 82, 82)',
        ),
    ),
    yaxis=dict(
        showgrid=True,
        zeroline=True,
        showline=True,
        showticklabels=True,
    ),
    autosize=False,
    margin=dict(
        autoexpand=False,
        l=100,
        r=20,
        t=110,
    ),
    showlegend=True,
    plot_bgcolor='white'
)

annotations = []

# Title
annotations.append(dict(xref='paper', yref='paper', x=0.0, y=1.05,
                              xanchor='left', yanchor='bottom',
                              text='India Scorecard',
                              font=dict(family='Arial',
                                        size=24,
                                        color='rgb(37,37,37)'),
                              showarrow=False))
# Source
annotations.append(dict(xref='paper', yref='paper', x=0.5, y=-0.1,
                              xanchor='center', yanchor='top',
                              text='Source: Nava Services & ' +
                                   'Storytelling with data Over vs Runs',
                              font=dict(family='Arial',
                                        size=14,
                                        color='rgb(150,150,150)'),
                              showarrow=False))

fig.update_layout(annotations=annotations)
fig.show()
```



## Match Result

In [33]:

```
print("India won by 6 wickets (4 balls left")
```

```
India won by 6 wickets (4 balls left
```

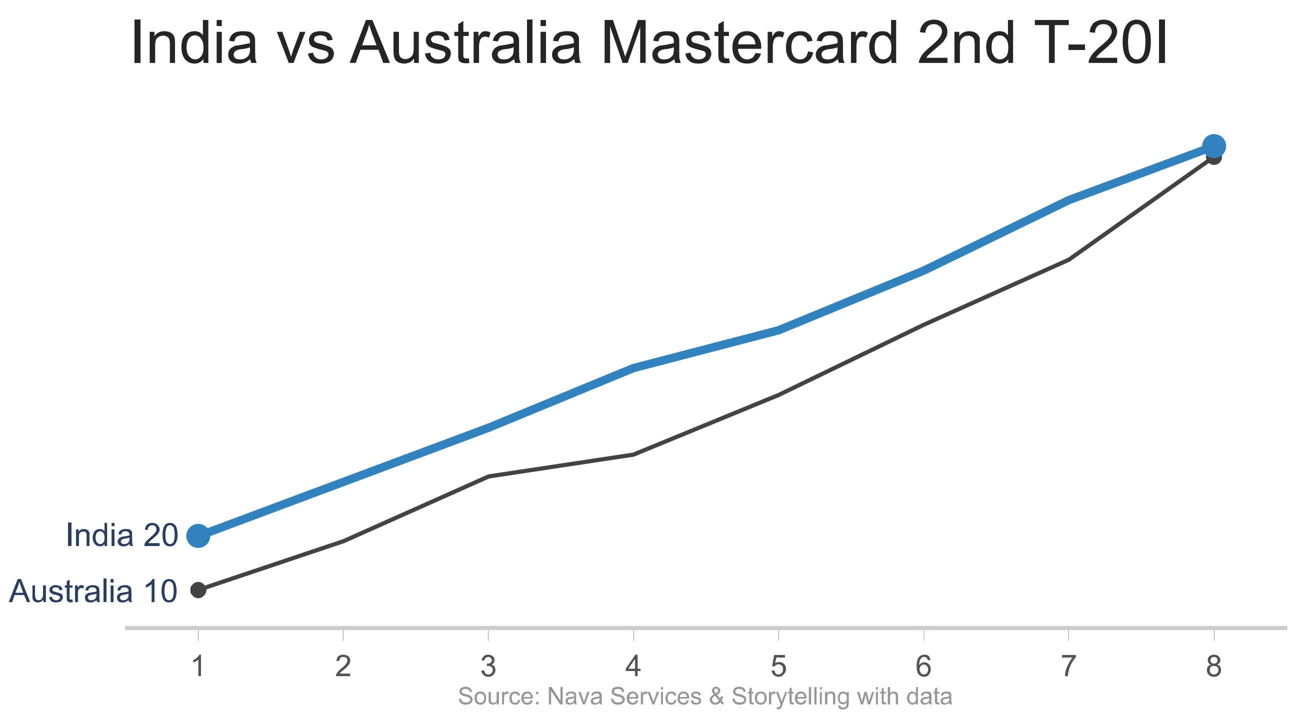
In [34]:

```
print("Player of the Match:-\nRohit Sharma (IND)\n46*(20)")
```

```
Player of the Match:-
Rohit Sharma (IND)
46*(20)
```

In [36]:

```
import plotly.graph_objects as go
import numpy as np

title = 'India vs Australia'
labels = ['Australia', 'India']
colors = ['rgb(67,67,67)',  'rgb(49,130,189)']
mode_size = [8, 12]
line_size = [2, 4]

x_data = np.vstack((np.arange(1, 9),)*2)

y_data = np.array([
    [10,19,31,35,46,59,71,90],
    [20,30,40,51,58,69,82,92]
])
fig = go.Figure()
for i in range(0, 2, 1):
  fig.add_trace(go.Scatter(x=x_data[i], y=y_data[i], mode='lines',
                           name=labels[i],
                           line=dict(color=colors[i],
                                     width=line_size[i]),
                           connectgaps=True,
    ))
    # endpoints
  fig.add_trace(go.Scatter(
        x=[x_data[i][0], x_data[i][-1]],
        y=[y_data[i][0], y_data[i][-1]],
        mode='markers',
            marker=dict(color=colors[i], size=mode_size[i])
        ))
    fig.update_layout(
        xaxis=dict(
            showline=True,
            showgrid=False,
            showticklabels=True,
            linecolor='rgb(204, 204, 204)',
            linewidth=2,
            ticks='outside',
            tickfont=dict(
                family='Arial',
                size=15,
                color='rgb(82, 82, 82)',
            ),
        ),
        yaxis=dict(
            showgrid=False,
            zeroline=False,
            showline=False,
            showticklabels=False,
        ),
        autosize=False,
        margin=dict(
            autoexpand=False,
            l=100,
            r=20,
            t=110,
    ),
    showlegend=False,
    plot_bgcolor='white'
)

annotations = []
# Adding labels
for y_trace, label, color in zip(y_data, labels, colors):
    # labeling the left_side of the plot
    annotations.append(dict(xref='paper', x=0.05, y=y_trace[0],
                                  xanchor='right', yanchor='middle',
                                  text=label + ' {}'.format(y_trace[0]),
                                  font=dict(family='Arial',
                                            size=16),
                                  showarrow=False))

# Title
annotations.append(dict(xref='paper', yref='paper', x=0.0, y=1.05,
                              xanchor='left', yanchor='bottom',
                              text='India vs Australia Mastercard 2nd T-20I',
                              font=dict(family='Arial',
                                        size=30,
                                        color='rgb(37,37,37)'),
                              showarrow=False))
# Source
annotations.append(dict(xref='paper', yref='paper', x=0.5, y=-0.1,
                              xanchor='center', yanchor='top',
                              text='Source: Nava Services & ' +
                                   'Storytelling with data',
                              font=dict(family='Arial',
                                        size=12,
                                        color='rgb(150,150,150)'),
                              showarrow=False))

fig.update_layout(annotations=annotations)

fig.show()
```



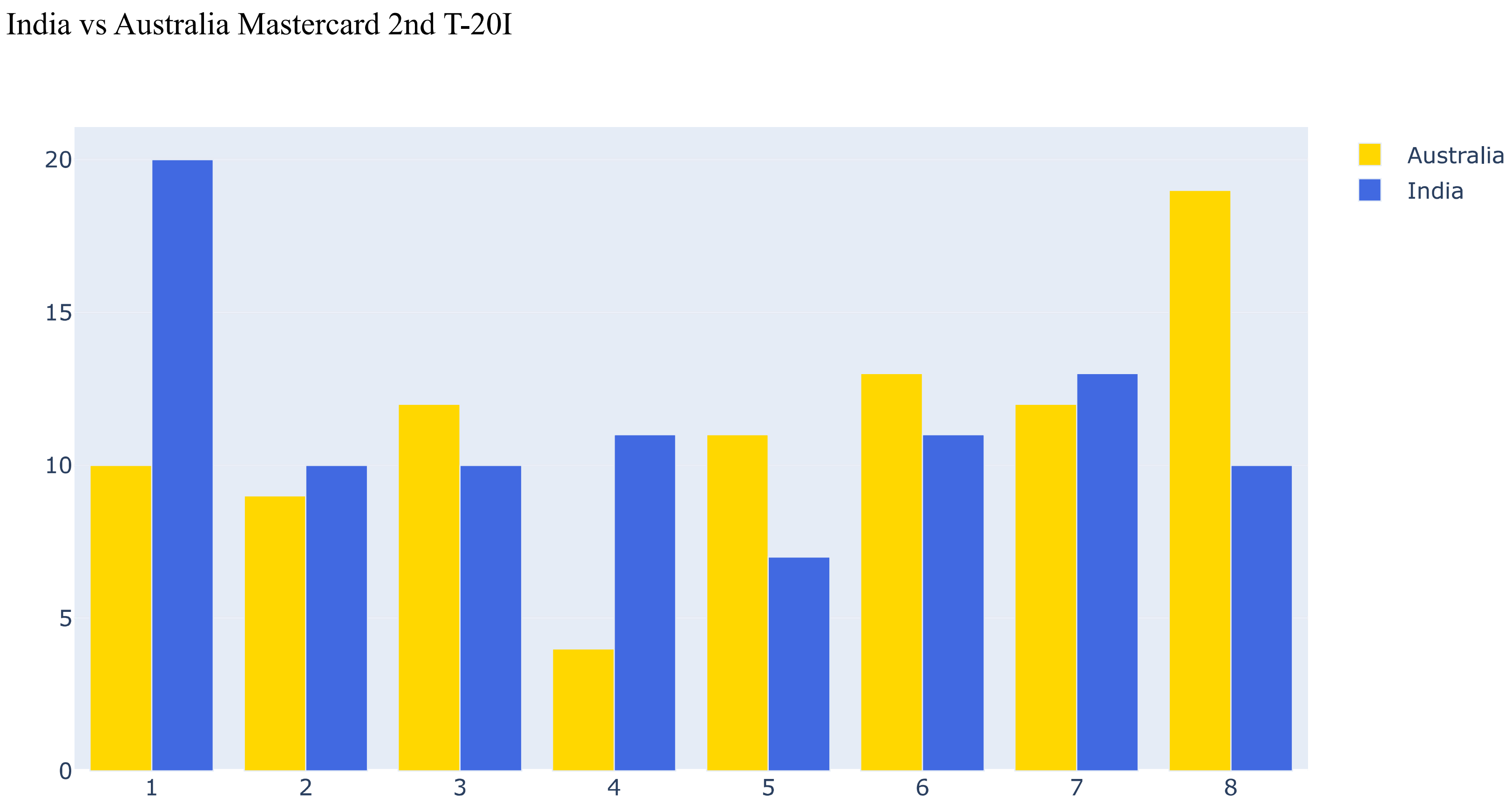
India vs Australia Mastercard 2nd T-20I

Source: Nava Services & Storytelling with data

In [37]:

```
import plotly.graph_objects as go

overs = [1,2,3,4,5,6,7,8]
team_a = [10,9,12,4,11,13,12,19]
team_b = [20,10,10,11,7,11,13,10]
fig = go.Figure()
fig.add_trace(go.Bar(
    x=overs,
    y=team_a,
    name='Australia',
    marker_color='gold'
))

fig.add_trace(go.Bar(
    x=overs,
    y=team_b,
    name='India',
    marker_color='royalblue'
))

# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)
```

```
fig.update_layout(title_text='India vs Australia Mastercard 2nd T-20I')

fig.show()
```



India vs Australia Mastercard 2nd T-20I

In [ ]: