In [1]:
```
import warnings
warnings.filterwarnings("ignore")
```

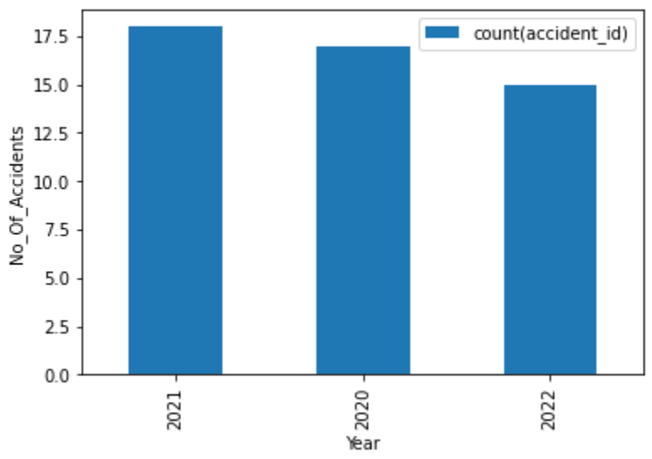
In [2]:
```
pip install mysql-connector-python
```

```
Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: mysql-connector-python in c:\programdata\anaconda3\lib\site-packages (8.0.30)
Requirement already satisfied: protobuf<=3.20.1,>=3.11.0 in c:\programdata\anaconda3\lib\site-packages (from mysql-connector-python) (3.19.1)
Note: you may need to restart the kernel to use updated packages.
```

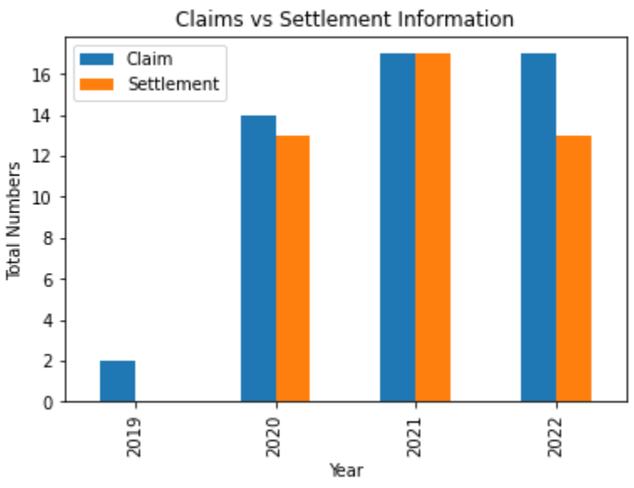
In [3]:
```
import mysql.connector as connection
import pandas as pd
import mysql.connector
import matplotlib.pyplot as plt

mydb = connection.connect(host="localhost", database = 'db_insurance',user="root", passwd="root",use_pure=True)
```

In [4]:
```
query = "select year(date),count(accident_id) from accident group by year(date);"
result_df = pd.read_sql(query,mydb)
result_df.set_index("year(date)", inplace = True)
plt.figure(figsize=(8, 6))
result_df.plot(kind="bar")
plt.xlabel("Year")
plt.ylabel("No_Of_Accidents")
plt.title("Accidents Information")
plt.show()
```

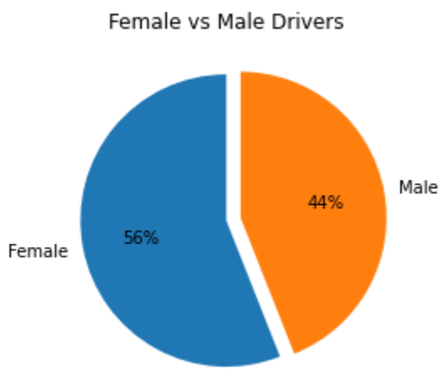
```
<Figure size 576x432 with 0 Axes>
```



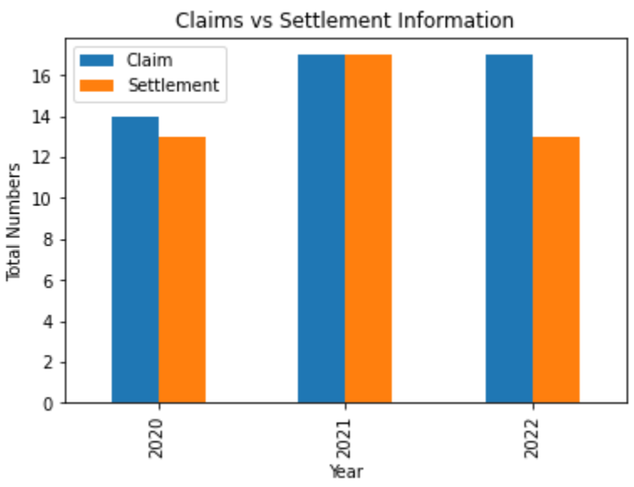

In [5]:
```
query = "select year(c.date) as Year, count(c.claim_id) as Claim, count(s.settlement_id) as Settlement from claim c left join settlement s on  c.settlement_id = s.settlement_id grou
result_df = pd.read_sql(query,mydb)
result_df.set_index("Year", inplace = True)
result_df.plot(kind="bar")
plt.xlabel("Year")
plt.ylabel("Total Numbers")
plt.title("Claims vs Settlement Information")
plt.show()
```



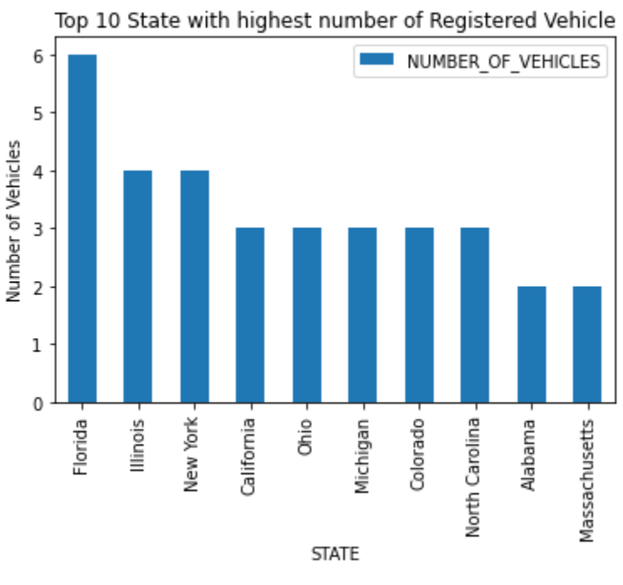

In [6]:
```
query = "select p.gender, count(person_id) as count from person p, driver d where p.person_id = d.driver_id group by p.gender;"
result_df = pd.read_sql(query,mydb)
myexplode = (0, 0.1)
sizes = plt.pie(result_df['count'], labels = result_df['gender'], startangle = 90, explode = myexplode, autopct='%.0f%%')
plt.title("Female vs Male Drivers")
plt.show()
```




In [7]:
```
query = "select year(c.date) as Year, count(c.claim_id) as Claim, count(s.settlement_id) as Settlement from claim c left join settlement s on  c.settlement_id = s.settlement_id grou
result_df = pd.read_sql(query,mydb)
result_df = result_df.iloc[1:,:]
result_df.set_index("Year", inplace = True)
result_df.plot(kind="bar")
plt.xlabel("Year")
plt.ylabel("Total Numbers")
plt.title("Claims vs Settlement Information")
plt.show()
```




In [8]:
```
query = "SELECT STATE, COUNT(REGISTRATION_NO) AS NUMBER_OF_VEHICLES FROM VEHICLE GROUP BY STATE ORDER BY COUNT(REGISTRATION_NO) DESC LIMIT 10;"
result_df = pd.read_sql(query,mydb)
result_df.set_index("STATE", inplace = True)
result_df.plot(kind="bar")
plt.xlabel("STATE")
plt.ylabel("Number of Vehicles")
plt.title("Top 10 State with highest number of Registered Vehicle")
plt.show()
```




In [ ]: