

Project 2 Tests

```
In [1]: # Import libraries
import pandas as pd
```

Part 2

```
In [2]: # Import py file
from db_connection import create_connection
```

```
In [3]: # Create database connection using valid vault file
engine = create_connection("vault.txt")
```

```
In [18]: # Verify connection works by querying the account table
pd.read_sql_query("""SELECT *
                    FROM transaction
                    LIMIT 5""", engine)
```

```
Out[18]:
```

	txn_id	txn_date	account_id	txn_type_cd	amount	teller_emp_id	execution_branch
0	1	2000-01-15	1	CDT	100.0	None	
1	2	2000-01-15	2	CDT	100.0	None	
2	3	2004-06-30	3	CDT	100.0	None	
3	4	2001-03-12	4	CDT	100.0	None	
4	5	2001-03-12	5	CDT	100.0	None	

```
In [19]: # Test error handling by providing an invalid vault filename
engine2 = create_connection("vaults.txt")
```

```

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FileNotFoundError                                Traceback (most recent call last)
Cell In[19], line 2
      1 # Test error handling by providing an invalid vault filename
----> 2 engine2 = create_connection( )

File ~/Documents/DSE_5002/Project2/db_connection.py:27, in create_connection
(filename)
     11 """
     12 Create a SQLAlchemy connection to the bank database
     13 using credentials stored in a vault file.
     (...)
     24
     25 """
     26 # Open file
----> 27 with open(filename, , encoding = ) as file:
     28     # Get username and password
     29     username = file.readline().strip()
     30     password = file.readline().strip()

FileNotFoundError: [Errno 2] No such file or directory: 'vaults.txt'

```

Part 4

```

In [20]: # import transactions py file
        from transactions import get_transactions_by_month

```

```

In [24]: # Test valid date
        get_transactions_by_month(engine, 1, 2000)

```

```

Out[24]:
   txn_date  txn_id  txn_type_cd  amount  teller_emp_id  execution_branch_id  funds
0  2000-01-15      1         CDT    100.0           None              None
1  2000-01-15      2         CDT    100.0           None              None
2  2000-01-15      9         CDT    100.0           None              None

```

```

In [25]: # Test valid date
        get_transactions_by_month(engine, 1, 2004)

```

```

Out[25]:
   txn_date  txn_id  txn_type_cd  amount  teller_emp_id  execution_branch_id  funds
0  2004-01-27     11         CDT    100.0           None              None
1  2004-01-12     14         CDT    100.0           None              None

```

```
In [26]: # Test invalid date
get_transactions_by_month(engine, 13, 2000)
```

Invalid month or year

```
Out[26]:   txn_date  txn_id  txn_type_cd  amount  teller_emp_id  execution_branch_id  funds
0         -1     -1           -1        -1             -1                 -1
```

```
In [27]: # Test invalid date
get_transactions_by_month(engine, 12, 1700)
```

Invalid month or year

```
Out[27]:   txn_date  txn_id  txn_type_cd  amount  teller_emp_id  execution_branch_id  funds
0         -1     -1           -1        -1             -1                 -1
```

Part 6

```
In [38]: # import class
from bank_client import BankTransactions
```

```
In [30]: # Create an instance of the class
bank = BankTransactions("vault.txt")
```

```
In [33]: # Test get_transactions
bank.get_transactions(1, 2000)
```

```
Out[33]:   txn_date  txn_id  txn_type_cd  amount  teller_emp_id  execution_branch_id  funds
0  2000-01-15      1          CDT    100.0          None          None
1  2000-01-15      2          CDT    100.0          None          None
2  2000-01-15      9          CDT    100.0          None          None
```

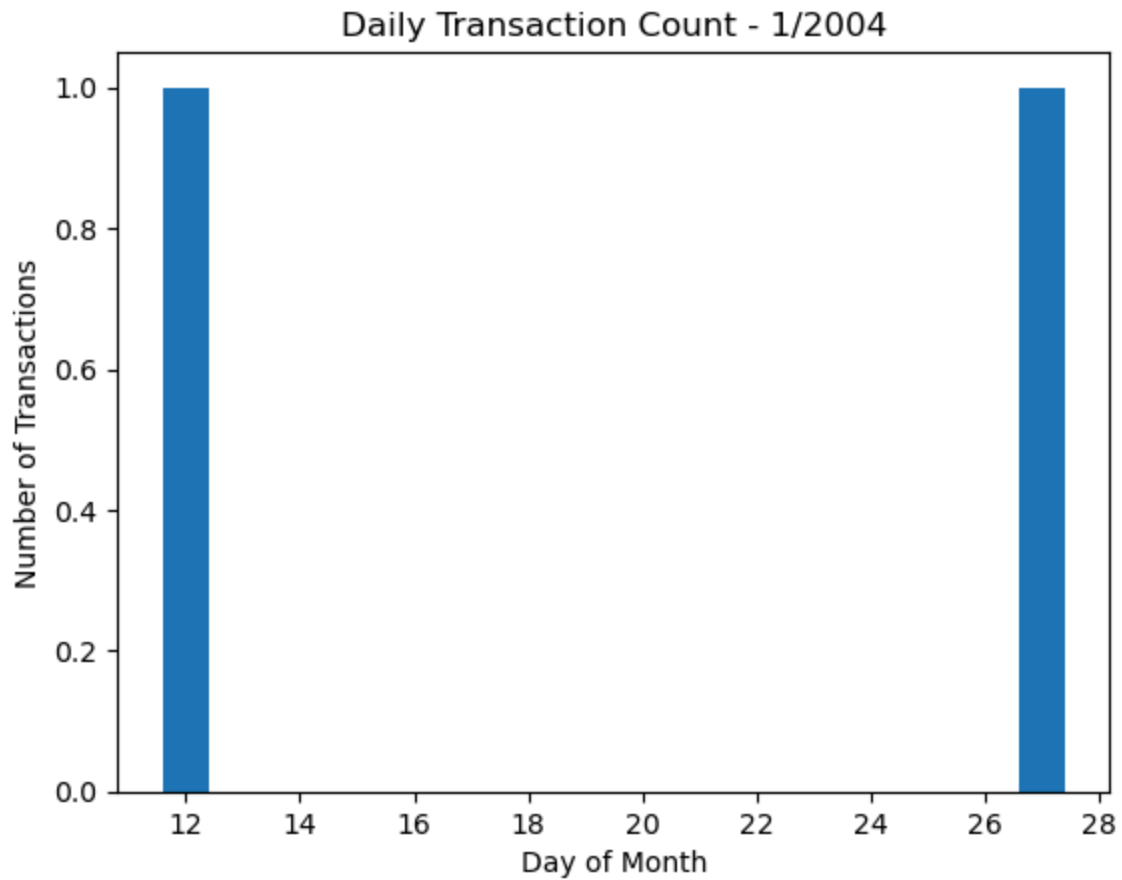
```
In [32]: # Test get_transactions
bank.get_transactions(13, 2000)
```

Invalid month or year

```
Out [32]:
```

	txn_date	txn_id	txn_type_cd	amount	teller_emp_id	execution_branch_id	funds
0	-1	-1	-1	-1	-1	-1	-1

```
In [35]: # Test plot_transactions_by_day
bank.plot_transactions_by_day(1, 2004)
```



```
In [36]: # Test plot_transactions_by_day with empty data set
bank.plot_transactions_by_day(10, 2000)
```

Cannot plot: no transactions found for that month/year.

```
In [37]: # Test plot_transactions_by_day with invalid date
bank.plot_transactions_by_day(13, 1700)
```

Invalid month or year
Cannot plot: invalid month/year input.