Assignment 1 DJIA

The Dow Jones Industrial Average (DJIA), or simply the Dow, is a stock market index that shows how 30 large publicly owned companies based in the United States have traded during a standard trading session in the stock market. -*Wikipedia*

Task 1

(a)Create a user with your name and a database named *testdb*.

(10 points)

(b)Create a table *US30* with these attributes: symbol(the Stock ID), price, total_share(total number of share in the market), P_E_ratio, market_value, total_profit. Obviously you should set the symbol as primary key.

(10 points)

(c)I will give you price, total_share(total number of share in the market) and P_E_ratio as below, and you should first Import them and then compute market_value and total_profit for each one of these 30 companies.

(15 points)

```
testdb=# select * from us30;
 symbol |  price  | total_share  | p_e_ratio | market_value | total_profit
--------+---------+--------------+-----------+--------------+--------------
 MMM    | 219.52  |    5.97e+008 |    27.68  |              |
 AXP    |  93.28  |    9.15e+008 |    31.41  |              |
 AAPL   | 167.78  |   5.082e+009 |    18.22  |              |
 BA     | 327.88  |    5.96e+008 |    24.41  |              |
 CAT    | 147.38  |    5.91e+008 |   116.97  |              |
 CVX    | 114.04  |   1.899e+009 |    23.51  |              |
 CSCO   |  42.89  |   4.818e+009 |    22.57  |              |
 KO     |  43.43  |   4.264e+009 |   149.76  |              |
 DWDP   |  63.71  |   2.326e+009 |    70.01  |              |
 XOM    |  74.61  |   4.237e+009 |    16.11  |              |
 GE     |  13.48  |   8.846e+009 |    11.52  |              |
 GS     | 251.86  |    3.98e+008 |    27.95  |              |
 HD     | 178.24  |   1.157e+009 |    24.45  |              |
 IBM    | 153.43  |    9.66e+008 |    24.99  |              |
 INTC   |  52.08  |    4.68e+009 |    26.17  |              |
 JNJ    | 128.15  |   2.684e+009 |   272.66  |              |
 JPM    | 109.97  |    3.47e+009 |    17.43  |              |
 MCD    | 156.38  |    7.97e+008 |    24.55  |              |
 MRK    |  54.47  |   2.696e+009 |    62.61  |              |
 MSFT   |  91.27  |   7.715e+009 |    33.68  |              |
 NKE    |  66.44  |   1.627e+009 |    26.47  |              |
 PFE    |  35.49  |   5.961e+009 |    10.08  |              |
 PG     |  79.28  |   2.556e+009 |    14.18  |              |
 TRV    | 138.86  |    2.84e+008 |    18.94  |              |
 UNH    |     214 |    9.68e+008 |    19.96  |              |
 UTX    | 125.82  |    8.23e+008 |    22.07  |              |
 VZ     |  47.82  |    4.15e+009 |     6.5   |              |
 V      | 119.62  |   2.061e+009 |    42.72  |              |
 WMT    |  88.97  |   2.987e+009 |    20.31  |              |
 DIS    | 100.44  |    1.51e+009 |    17.65  |              |
(30 行记录)
```

Task 2

(a) Sort the companies   by   *market_value*

Give the result by accending order.

(5 points)

(b) Sort the companies   by   *total_profit*

Give the result by Descending order

(5 points)

(c) List three companies with highest p/e ratio.

(5 points)

The DJIA reached its highest point 26616.71 in 2018-1-26 and is currently at 24103.11 (2018-3-29).

The DJIA is computed as follows:

$$\text{DJIA} = \frac{\sum p}{d}$$

where *p* are the prices of the component stocks and *d* is the *Dow Divisor*.

The Dow Divisor is currently 0.145235.

Task 3

(a)   Use the aggregate function sum() to compute DJIA.

(10 points)

(b)   Write a function DJIA(*Dow Divisor*) to compute DJIA. (note that this function has only one real   parameter)

(15 points)

(c)   Suppose the DJIA component stocks changed, Google took the place of Microsoft, please find the information of Google at 2018-3-29 and update table *US30* then recompute DJIA with function you write in (b).

(15 points)

Task 4

With Monthly K line graph of DJIA Combining the current economic

situation and international relations ,do you think the US stock

market will enter a bear market?

(10 points This is an open issue. Serious answers can all get full

points.)