DRIVER PROGRAM

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```
cout<<"***input***"<<endl;
BigNUM n1;
cout << "input some number:" << endl;
cin >> n1;
cout << "output it:" << endl;
cout << n1 << endl << endl<<endl;
```

```
Microsoft Visual Studio 偵錯
***input***
input some number:
9513578524563
output it:
9,513,578,524,563
```

將輸入的string轉成數字型態放入大數後可以按照老師所要求的規格輸出

```
cout<<"*** / ***"<<endl;
BigNUM n2(2, 10), n3(2,11);
cout <<"n2="<< n2 << endl;
cout <<"n3="<< n3 << endl;
cout <<"n3/n2="<< n3 / n2 << endl;
cout << "n2/n3="<<n2 / n3 << endl << endl << endl;
```

```
*** / ***
n2=1,024
n3=2,048
n3/n2=2
n2/n3=0
```

檢查除法的數值正確與否

除法

```
cout << "*** getsize ***" << endl;
BigNUM n4(2,10 );
cout << "n4(2,10)=1024" << endl;
cout << "n4size=" << n4.getSize() << endl << endl << endl;
```

```
*** getsize ***
n4(2,10)=1024
n4size=2

*** getcapacity ***
```

回傳本身的size數值

getsize

```
cout << "*** getcapacity ***" << endl;
cout << "n4(2,10)=1024" << endl;
cout << "n4capacity=" << n4.getCapcity() << endl << endl << endl;
```

```
*** getcapacity ***
n4(2,10)=1024
n4capacity=3
```

回傳本身的capacity數值

getcapacity

```cpp
cout << "*** resize ***" << endl;
BigNUM n5(123456789);
cout << "n5=123456789" << endl;
cout << "n5size_before=" << n5.getSize() << endl;
n5.resize(11);
cout << "n5size_after=" << n5.getSize() << endl << endl << endl;
```

```
*** resize ***
n5=123456789
n5size_before=3
n5size_after=11

*** reserve ***
```

重新設定更改過後的size數值

resize

```cpp
cout << "*** reserve ***" << endl;
BigNUM n6(987654321);
cout << "n6=987654321" << endl;
cout << "n6capacity_before=" << n6.getCapcity() << endl;
cout << "reserve(15)" << endl;
n6.reserve(15);
cout << "n6capacity_after=" << n6.getCapcity() << endl << endl << e
```

```
*** reserve ***
n6=987654321
n6capacity_before=3
reserve(15)
n6capacity_after=24

*** output ***
n7(517,430)
n7size=118
```

重新設定更改過後的capacity數值

reserve

```
cout << "*** output ***" << endl;
BigNUM n7(517, 130);
cout << "n7(517,430)" << endl;
cout << "n7size=" << n7.getSize() << endl;
cout << "n7capacity=" << n7.getCapcity() << endl;
cout << "n7=" << n7 << endl << endl << endl;
return 0;
}
```

```
*** output ***
n7(517,430)
n7size=118
n7capacity=192
n7=56,724,490,300,928,241,577,820,491,288,660,128,682,616,578,64
9,124,600,898,057,886,806,114,570,468,452,123,331,588,969,967,59
4,051,360,302,321,744,431,492,832,248,847,690,766,705,678,492,13
9,293,842,852,185,610,075,326,536,666,148,400,041,676,595,499,16
7,803,484,376,084,319,610,849,598,297,311,473,971,418,378,577,02
8,811,305,724,434,197,900,250,192,470,046,581,423,364,076,229,24
7,794,410,239,792,969,957,225,728,809,422,937,021,305,282,957,17
7,698,399,142,701,965,849
```

確認輸出符合老師要的規格

output