Input	Expected Output	Actual Output	Pass?
Command Line Argument: Crime.csv **Scanner Input:** 1 0 Q	********** Welcome to the US Crime Statistical Application ************************* Enter the number of the question you want answered. Enter 'Q' to quit the program : 1. What were the percentages in population growth for each consecutive year from 1994 – 2013? 2. What year was the Murder rate the highest? 3. What year was the Murder rate the lowest? 4. What year was the Robbery rate the highest? 5. What year was the Robbery rate the lowest? 6. What year was the Motor Vehicle Theft rate the highest? 7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection: Population growth from 1994 to 1995 was 0.9512% Population growth from 1995 to 1996 was 0.9229% Population growth from 1996 to 1997 was 0.9633% Population growth from 1997 to 1998 was 0.9203% Population growth from 1998 to 1999 was 0.9039% Population growth from 1999 to 2000 was 3.2018% Population growth from 2000 to 2001 was 1.3843% Population growth from 2001 to 2002 was 0.931% Population growth from 2002 to 2003 was 0.9775% Population growth from 2003 to 2004 was 0.9862% Population growth from 2004 to 2005 was 0.9706% Population growth from 2005 to 2006 was 0.9752%	********** Welcome to the US Crime Statistical Application ************************* Enter the number of the question you want answered. Enter 'Q' to quit the program : 1. What were the percentages in population growth for each consecutive year from 1994 – 2013? 2. What year was the Murder rate the highest? 3. What year was the Murder rate the lowest? 4. What year was the Robbery rate the highest? 5. What year was the Robbery rate the lowest? 6. What year was the Motor Vehicle Theft rate the highest? 7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection: Population growth from 1994 to 1995 was 0.9512% Population growth from 1995 to 1996 was 0.9229% Population growth from 1996 to 1997 was 0.9633% Population growth from 1997 to 1998 was 0.9203% Population growth from 1998 to 1999 was 0.9039% Population growth from 1999 to 2000 was 3.2018% Population growth from 2000 to 2001 was 1.3843% Population growth from 2001 to 2002 was 0.931% Population growth from 2002 to 2003 was 0.9775% Population growth from 2003 to 2004 was 0.9862% Population growth from 2004 to 2005 was 0.9706% Population growth from 2005 to 2006 was 0.9752%	YES

Population growth from 2006 to 2007 was 0.7424%
Population growth from 2007 to 2008 was 0.8085%
Population growth from 2008 to 2009 was 0.9692%
Population growth from 2009 to 2010 was 0.7569%
Population growth from 2010 to 2011 was 0.7298%
Population growth from 2011 to 2012 was 0.7336%
Population growth from 2012 to 2013 was 0.7185%

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 – 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?
7. What year was the Motor Vehicle Theft rate the lowest?
Q. Quit the program

Enter your selection:

You have entered invalid input. Please try again.

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 – 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?

	7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection Thank you for trying the US Crimes Statistics Program. Elapsed time in seconds was: 28	7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection Thank you for trying the US Crimes Statistics Program. Elapsed time in seconds was: 28	
Command Line Argument: Crime.csv **Scanner Input:** 5 4 3 q	********** Welcome to the US Crime Statistical Application ************************** Enter the number of the question you want answered. Enter 'Q' to quit the program : 1. What were the percentages in population growth for each consecutive year from 1994 – 2013? 2. What year was the Murder rate the highest? 3. What year was the Murder rate the lowest? 4. What year was the Robbery rate the highest? 5. What year was the Robbery rate the lowest? 6. What year was the Motor Vehicle Theft rate the highest? 7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection: The robbery rate was lowest in 2013 Enter the number of the question you want answered. Enter 'Q' to quit the program : 1. What were the percentages in population growth for each consecutive year from 1994 – 2013? 2. What year was the Murder rate the highest? 3. What year was the Murder rate the lowest?	********** Welcome to the US Crime Statistical Application ************************** Enter the number of the question you want answered. Enter 'Q' to quit the program : 1. What were the percentages in population growth for each consecutive year from 1994 – 2013? 2. What year was the Murder rate the highest? 3. What year was the Murder rate the lowest? 4. What year was the Robbery rate the highest? 5. What year was the Robbery rate the lowest? 6. What year was the Motor Vehicle Theft rate the highest? 7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection: The robbery rate was lowest in 2013 Enter the number of the question you want answered. Enter 'Q' to quit the program : 1. What were the percentages in population growth for each consecutive year from 1994 – 2013? 2. What year was the Murder rate the highest? 3. What year was the Murder rate the lowest?	YES

4. What year was the Robbery rate the highest? 5. What year was the Robbery rate the lowest? 6. What year was the Motor Vehicle Theft rate the highest? 7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection: The robbery rate was highest in 1994 Enter the number of the question you want answered. Enter 'Q' to quit the program : 1. What were the percentages in population growth for each consecutive year from 1994 – 2013? 2. What year was the Murder rate the highest? 3. What year was the Murder rate the lowest? 4. What year was the Robbery rate the highest? 5. What year was the Robbery rate the lowest? 6. What year was the Motor Vehicle Theft rate the highest? 7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection: The murder rate was lowest in 2013 Enter the number of the question you want answered. Enter 'Q' to quit the program : 1. What were the percentages in population growth for each consecutive year from 1994 – 2013? 2. What year was the Murder rate the highest? 3. What year was the Murder rate the lowest? 4. What year was the Robbery rate the highest?	4. What year was the Robbery rate the highest? 5. What year was the Robbery rate the lowest? 6. What year was the Motor Vehicle Theft rate the highest? 7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection: The robbery rate was highest in 1994 Enter the number of the question you want answered. Enter 'Q' to quit the program : 1. What were the percentages in population growth for each consecutive year from 1994 – 2013? 2. What year was the Murder rate the highest? 3. What year was the Murder rate the lowest? 4. What year was the Robbery rate the highest? 5. What year was the Robbery rate the lowest? 6. What year was the Motor Vehicle Theft rate the highest? 7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection: The murder rate was lowest in 2013 Enter the number of the question you want answered. Enter 'Q' to quit the program : 1. What were the percentages in population growth for each consecutive year from 1994 – 2013? 2. What year was the Murder rate the highest? 3. What year was the Murder rate the lowest? 4. What year was the Robbery rate the highest?

	5. What year was the Robbery rate the lowest? 6. What year was the Motor Vehicle Theft rate the highest? 7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection: Thank you for trying the US Crimes Statistics Program. Elapsed time in seconds was: 21	5. What year was the Robbery rate the lowest? 6. What year was the Motor Vehicle Theft rate the highest? 7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection: Thank you for trying the US Crimes Statistics Program. Elapsed time in seconds was: 21	
Command Line Argument: Crime.csv **Scanner Input:** 7 6 2 q	********** Welcome to the US Crime Statistical Application ************************* Enter the number of the question you want answered. Enter 'Q' to quit the program : 1. What were the percentages in population growth for each consecutive year from 1994 – 2013? 2. What year was the Murder rate the highest? 3. What year was the Murder rate the lowest? 4. What year was the Robbery rate the highest? 5. What year was the Robbery rate the lowest? 6. What year was the Motor Vehicle Theft rate the highest? 7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection: The motor vehicle theft rate was lowest in 2013 Enter the number of the question you want answered. Enter 'Q' to quit the program : 1. What were the percentages in population growth for each	********** Welcome to the US Crime Statistical Application ************************* Enter the number of the question you want answered. Enter 'Q' to quit the program : 1. What were the percentages in population growth for each consecutive year from 1994 – 2013? 2. What year was the Murder rate the highest? 3. What year was the Murder rate the lowest? 4. What year was the Robbery rate the highest? 5. What year was the Robbery rate the lowest? 6. What year was the Motor Vehicle Theft rate the highest? 7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection: The motor vehicle theft rate was lowest in 2013 Enter the number of the question you want answered. Enter 'Q' to quit the program : 1. What were the percentages in population growth for each	YES

consecutive year from 1994 – 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?
7. What year was the Motor Vehicle Theft rate the lowest?
Q. Quit the program

Enter your selection

The motor vehicle theft rate was highest in 1994

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 – 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?
7. What year was the Motor Vehicle Theft rate the lowest?
Q. Quit the program

Enter your selection:

The murder rate was highest in 1994

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 – 2013?

	2. What year was the Murder rate the highest? 3. What year was the Murder rate the lowest? 4. What year was the Robbery rate the highest? 5. What year was the Robbery rate the lowest? 6. What year was the Motor Vehicle Theft rate the highest? 7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection: Thank you for trying the US Crimes Statistics Program. Elapsed time in seconds was: 41	2. What year was the Murder rate the highest? 3. What year was the Murder rate the lowest? 4. What year was the Robbery rate the highest? 5. What year was the Robbery rate the lowest? 6. What year was the Motor Vehicle Theft rate the highest? 7. What year was the Motor Vehicle Theft rate the lowest? Q. Quit the program Enter your selection: Thank you for trying the US Crimes Statistics Program. Elapsed time in seconds was: 41	

Test Case #1

```
<terminated> CrimeTest [Java Application] /usr/lib/jvm/java-8-oracle/bin/java (Dec 15, 2018, 6:49:54 AM)
********** Welcome to the US Crime Statistical Application **************************

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 — 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?
7. What year was the Motor Vehicle Theft rate the lowest?
Q. Quit the program

Enter your selection: 1

Population growth from 1994 to 1995 was 0.9512%
Population growth from 1995 to 1996 was 0.9229%
Population growth from 1996 to 1997 was 0.9633%
Population growth from 1997 to 1998 was 0.9203%
Population growth from 1998 to 1999 was 0.9039%
Population growth from 1999 to 2000 was 3.2018%
Population growth from 2000 to 2001 was 1.3843%
Population growth from 2001 to 2002 was 0.931%
Population growth from 2002 to 2003 was 0.9775%
Population growth from 2003 to 2004 was 0.9862%
Population growth from 2004 to 2005 was 0.9706%
Population growth from 2005 to 2006 was 0.9752%
Population growth from 2006 to 2007 was 0.7424%
Population growth from 2007 to 2008 was 0.8085%
Population growth from 2008 to 2009 was 0.9692%
Population growth from 2009 to 2010 was 0.7569%
Population growth from 2010 to 2011 was 0.7298%
Population growth from 2011 to 2012 was 0.7336%
Population growth from 2012 to 2013 was 0.7185%

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 — 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?
7. What year was the Motor Vehicle Theft rate the lowest?
Q. Quit the program

Enter your selection: 0

You have entered invalid input. Please try again.

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 — 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?
7. What year was the Motor Vehicle Theft rate the lowest?
Q. Quit the program

Enter your selection: Q

Thank you for trying the US Crimes Statistics Program.

Elapsed time in seconds was: 28
```

Test Case #2

```
<terminated> CrimeTest [Java Application] /usr/lib/jvm/java-8-oracle/bin/java (Dec 15, 2018, 7:04:35 AM)
********** Welcome to the US Crime Statistical Application **************************

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 — 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?
7. What year was the Motor Vehicle Theft rate the lowest?
Q. Quit the program

Enter your selection: 5

The robbery rate was lowest in 2013

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 — 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?
7. What year was the Motor Vehicle Theft rate the lowest?
Q. Quit the program

Enter your selection: 4

The robbery rate was highest in 1994

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 — 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?
7. What year was the Motor Vehicle Theft rate the lowest?
Q. Quit the program

Enter your selection: 3

The murder rate was lowest in 2013

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 — 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?
7. What year was the Motor Vehicle Theft rate the lowest?
Q. Quit the program

Enter your selection: q

Thank you for trying the US Crimes Statistics Program.

Elapsed time in seconds was: 21
```

Test Case #3

```
<terminated> CrimeTest [Java Application] /usr/lib/jvm/java-8-oracle/bin/java (Dec 15, 2018, 7:07:04 AM)
********** Welcome to the US Crime Statistical Application ***************************

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 — 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?
7. What year was the Motor Vehicle Theft rate the lowest?
Q. Quit the program

Enter your selection: 7

The motor vehicle theft rate was lowest in 2013

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 — 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?
7. What year was the Motor Vehicle Theft rate the lowest?
Q. Quit the program

Enter your selection: 6

The motor vehicle theft rate was highest in 1994

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 — 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?
7. What year was the Motor Vehicle Theft rate the lowest?
Q. Quit the program

Enter your selection: 2

The murder rate was highest in 1994

Enter the number of the question you want answered. Enter 'Q' to quit the program :

1. What were the percentages in population growth for each consecutive year from 1994 — 2013?
2. What year was the Murder rate the highest?
3. What year was the Murder rate the lowest?
4. What year was the Robbery rate the highest?
5. What year was the Robbery rate the lowest?
6. What year was the Motor Vehicle Theft rate the highest?
7. What year was the Motor Vehicle Theft rate the lowest?
Q. Quit the program

Enter your selection: q

Thank you for trying the US Crimes Statistics Program.

Elapsed time in seconds was: 41
```