HW2 Constraint

1. Cast Operation

- Change below characters into integer by using cast operation(\texttt{static\_cast\_int()})
  
  
  
  \texttt{Hello, World! 170427 ^ ^}
  
- You must use \texttt{static\_cast\_int()} to change any character into int.
- Do not use \texttt{\textasciicolon} expression to get int value.
- Print each letter casted into integer on one line.
- This Problem does not get any input. Just print out each numbers casted from each alphabet, divided by one space between.

2. Integer dividing by digits

- Divide a five-digit integer into 5 integers and print them with spaces between.

2-1. Input & Output example

\begin{verbatim}
42339  //Input
4 2 3 3 9  //output
\end{verbatim}

3. Employeers

- Create a class called Employee that includes 3 pieces of information below as data members

  \begin{verbatim}
  string first\_name  
  string last\_name  
  int monthly\_salary
  \end{verbatim}

- \texttt{string\_first\_name} saves first name of a employee
- \texttt{string\_last\_name} saves last name of a employee
- \texttt{int\_monthly\_salary} saves monthly salary of a employee
- Provide a setter and getter functions for each data member.
- If \texttt{monthly\_salary} is not positive, set it to 0.
- Write a test program that demonstrate class Employee's capabilities(first\_name, last\_name, and yearly\_salary) under the form below
  
  \begin{verbatim}
  Employee[<first\_name> <last\_name>\_Salary : $<yearly\_salary>
  \end{verbatim}

- Give each Employee 10\% raise and display capabilities again
- If the yearly\_salary calculated is not int type, you can use static\_cast() we used at Problem 1.

3-1. Input example

\begin{verbatim}
2
First Last 10000
Second bean 22222
\end{verbatim}

3-2. Output example
4. Infinite powers of the integer 2

- Write a program that prints the powers of the integer 2
- You don't have to submit this program, but make sure you build your own program, and write its results in your report.

4-1. Output example

2
4
8
16
32
64
.
.
.

5. Mail order house program

- There are 5 products whose retail prices are:
  
  Product 1 - $2.98  
  Product 2 - $4.50  
  Product 3 - $9.98  
  Product 4 - $4.49  
  Product 5 - $6.87  

- Write a program that reads a series of pairs of numbers as follows.
  
  product_number  
  quantity_sold  

- You can enter endlessly many numbers, until you type Closed.
- Your program should use a switch statement to determine the retail price for each product.
- Calculate and Display the total retail value of all products sold.

5-1. Input example

1 5
2 10
1 3
3 8
2 10
4 8
Closed

5-2. Output example

Total retail value : 229.6