**CPP Problem Design**

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| **Subject:** **English Number Calculator** |
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| **Main testing concept:** Dynamic arrays   |  |  | | --- | --- | | **Basics** | **Functions** | | ■ C++ BASICS  □ FLOW OF CONTROL  ■ FUNCTION BASICS  □ PARAMETERS AND OVERLOADING  □ ARRAYS  □ STRUCTURES AND CLASSES  □ CONSTRUCTORS AND OTHER TOOLS  ■ OPERATOR OVERLOADING, FRIENDS,AND REFERENCES  ■ STRINGS  ■ POINTERS AND DYNAMIC ARRAYS | □ SEPARATE COMPILATION AND NAMESPACES  □ STREAMS AND FILE I/O  □ RECURSION  □ INHERITANCE  □ POLYMORPHISM AND VIRTUAL FUNCTIONS  □ TEMPLATES  □ LINKED DATA STRUCTURES  □ EXCEPTION HANDLING  □ STANDARD TEMPLATE LIBRARY  □ PATTERNS AND UML | |
| **Description:**  User will first input a number to decide the number of input data. Then for each input, the user will input an operator and two numbers between zero and ten in English, all in small capitals and without any space. You should calculate these two numbers with the following operator, and output the answer in small capitals. Beware that all numbers given in testing data can be divided with no remainder, and all the testing data used to test your program will only output positive integers between zero and twenty at last.  **Input:**  No input.  **Output:**  As following sample.  **Sample Input / Output：**   |  |  | | --- | --- | | Sample Input | Sample Output | | 5  sevenpluseight  fiveminustwo  threetimesfour  eightdividedbyfour  threetimesfourminusthreeplustwo | fifteen  three  twelve  two  eleven | |  |  | |
| **□ Eazy,Only basic programming syntax and structure are required.**  **□ Medium,Multiple programming grammars and structures are required.**  **■ Hard,Need to use multiple program structures or more complex data types.** |
| **Expected solving time:**  80 minutes |
| **Other notes:** |