**CPP Problem Design**

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| **Subject: Square Code** |
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| **Main testing concept: String**   |  |  | | --- | --- | | **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:**  The input messages of each line are English characters without spaces. Try to put the characters into a n\*n square. Note that (n-1)^2 < message length <= n^2.  **Input:**  Input a string without whitespace.  **Output:**  The coded message is obtained by reading down the columns going left to right.  **Sample Input / Output：**   |  |  | | --- | --- | | Sample Input | Sample Output | | HaveANiceDay  Idontknowwhoyouare,butiwillfoundyou  helloworld | HAe  aND  via  ecy  Iny,in  doobld  owuuly  nwatfo  thriou  koewu  hol  ewd  lo  lr | |
| **■ 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:**  5 minutes |
| **Other notes:** |