## Project 2: Correctness

**Due** Oct 16 by 11:59pm **Points** 60

No Content

**Project 2: Correctness Rubric** 

| Criteria                                 | Ratings   |  |  |  |  |                                 |  |         |
|--|---|--|--|--|--|---------------------------------|--|---------|
| replaceFirstK:<br>correct<br>performance | 2.0 pts<br>Full Marks<br>Works on<br>all inputs.  | 1.0 pts<br>Good<br>Works on the<br>or more bou   |  | 0.0 pts No marks  ut fails on one  Does not work in a majority of cases. |  | marks<br>es not work in a       | 2.0 pts  |         |
| replaceFirstK:<br>good code design       | 2.0 pts Full Marks A reasonable (even if not counting problem with the problem with the problem)  | orrect) for  | problen<br>traversa  | •  |  |                                 | 0.0 pts No Marks The algorithm used is not reasonable for the problem.                                       | 2.0 pts |
| replaceFirstK: efficient memory use      | string or string  | Marks es not create eccessary copies of a ng or string builder. es a StringBuilder when eating a string with a |  |  | Builder correctly<br>tring has to be<br>a a loop. Creates<br>essary strings in<br>problem. |                                 | 0.0 pts No Marks String creation is required and/or done in a loop and is not using StringBuilder correctly. | 2.0 pts |
| replaceFirstK:<br>uses the proper<br>API | 2.0 pts Full Marks  Has a loop to traverse the data and does not use any class or method of the API not permitted on the project  O.0 pts No Marks Uses a class or method from the API that is not permitted OR does not have a loop that traverses the data. |  |  |  |  |                                 |  | 2.0 pts |
| replaceFirstK:<br>break/continue         | 2.0 pts Full Marks All stopping of loops (other to in the loop cooperate, continuminics a break)  | turn) is<br>o use of   | urn) is present and it uses break, continue, or code use of that mimics a break. All loop stopping |  |  | continue, or code<br>p stopping | 2.0 pts  |         |
| allChars: correct performance            | 2.0 pts Full Marks Works on all inputs.   | 1.0 pts<br>Good<br>Works on the<br>or more bou   |  |  | ut fails on one  | Doe                             | pts Marks es not work in a ority of cases.   | 2.0 pts |

| Criteria                                    | Ratings  |   |   |                 |   |              |  |         |
|---|--|---|---|-----------------|---|--------------|--|---------|
| allChars: good<br>code design               | 2.0 pts Full Marks A reasonable (even if not continue problem value)   | orrect) for   | 1.0 pts Good Reasonable loops/algorithm for a problem but significantly more traversals of the data than necessary.                                 |                 |   |              | 0.0 pts No Marks The algorithm used is not reasonable for the problem.                                       | 2.0 pts |
| allChars: efficient memory use              | 2.0 pts Full Marks Does not creat unnecessary string or string Uses a String creating a stri loop.   | copies of a<br>g builder.<br>Builder when   | 1.0 pts Good Uses StringBuilder correctly anytime a string has to be created with a loop. Creates extra unnecessary strings in solving the problem. |                 |   |              | 0.0 pts No Marks String creation is required and/or done in a loop and is not using StringBuilder correctly. | 2.0 pts |
| allChars: uses the proper API               | 2.0 pts Full Marks Has a loop to traverse the data and does not use any class or method of the API not permitted on the project  0.0 pts No Marks Uses a class or method from the API that is not permitted OR does not have a loop that traverses the data. |   |   |                 |   |              | OR does not have   | 2.0 pts |
| allChars:<br>break/continue                 | loops (other t   | onditions for the<br>han method re<br>Indition, and no<br>ue, or code that<br>ak. | turn) is present and it uses breal that mimics a break. All I   |                 |   | ak, d<br>Ioo | continue, or code<br>p stopping  | 2.0 pts |
| showCharOfString:<br>correct<br>performance | 2.0 pts Full Marks Works on all inputs.  | 1.0 pts Good Works on the main case or more boundary cases                        |   |                 |   |              |  | 2.0 pts |
| showCharOfString:<br>good code design       | (even if not correct) for probl  |   |   | n but sals of t | oops/algorithm for t<br>significantly more<br>the data than | he           | 0.0 pts No Marks The algorithm used is not reasonable for the problem.                                       | 2.0 pts |

| Criteria                                     |   | Ratings                   |  |   |  |       |  |         |
|--|---|---------------------------|--|---|--|-------|--|---------|
| showCharOfString:<br>efficient memory<br>use | ate<br>copies of a<br>g builder.<br>Builder when<br>ing with a  | anytin<br>create<br>extra |  |   | 0.0 pts No Marks String creation is required and/or done in a loop and is not using StringBuilder correctly. |       | 2.0 pts  |         |
| showCharOfString:<br>uses the proper<br>API  | not use any c   | -                         |  |   |  |       |  | 2.0 pts |
| showCharOfString:<br>break/continue          | 2.0 pts Full Marks All stopping conditions for the loops (other than method return) is in the loop condition, and no use of break, continue, or code that mimics a break. |                           |  | O.0 pts No Marks No loops to traverse the data OR a loop is present and it uses break, continue, or code that mimics a break. All loop stopping conditions (other than method return) is not in the loop condition. |  |       | 2.0 pts  |         |
| hangman: correct performance                 | 2.0 pts Full Marks Works on all inputs.   | Good  Works on the main c |  |   |  |       |  | 2.0 pts |
| hangman: good<br>code design                 | (even if not correct) for problem   |                           |  | nable l<br>n but s<br>als of t  | oops/algorithm fo<br>significantly more<br>the data than   | r the | 0.0 pts No Marks The algorithm used is not reasonable for the problem. | 2.0 pts |

| 3/20/2020                                  | Project 2: Correctness  |  |                   |                                |   |  |  |         |
|--|---|--|-------------------|--------------------------------|---|--|--|---------|
| Criteria                                   | Ratings   |  |                   |                                |   |  |  | Pts     |
| hangman: efficient<br>memory use           | unnecessary<br>string or string<br>Uses a String  | Coull Marks  Does not create Innecessary copies of a anyting or string builder.  Uses a StringBuilder when reating a string with a solving |                   |                                | Builder correctly<br>tring has to be<br>a a loop. Creates<br>essary strings in<br>problem.                                  | 0.0 pts No Marks String creation is required and/or done in a loop and is not using StringBuilder correctly. | 2.0 pts  |         |
| hangman: uses<br>the proper API            | Full Marks  Has a loop to traverse the data and does not use any class or method of the API |  |                   |                                | 0.0 pts No Marks Uses a class or method from the API that is not permitted OR does not have a loop that traverses the data. |  |  | 2.0 pts |
| hangman:<br>break/continue                 | loops (other t  | onditions for the<br>han method rete<br>ndition, and no<br>ue, or code that  | urn) is<br>use of | '                              |   |  |  | 2.0 pts |
| 1D hiddenString:<br>correct<br>performance | 2.0 pts Full Marks Works on all inputs.   | Full Marks Good  Works on Works on the main ca   |                   |                                | ut fails on one   | Doe  | ots<br>Marks<br>s not work in a<br>ority of cases.                     | 2.0 pts |
| 1D hiddenString:<br>good code design       | (even if not correct) for problem   |  |                   | nable l<br>n but s<br>als of t | oops/algorithm fo<br>ignificantly more<br>he data than  | r the  | 0.0 pts No Marks The algorithm used is not reasonable for the problem. | 2.0 pts |

| 0/20/2020                                   |   |  |   | Project 2   | : Correctness  |   |  |         |
|---|---|--|---|---|--|---|--|---------|
| Criteria                                    | Ratings   |  |   |   |  | Pts   |  |         |
| 1D hiddenString:<br>efficient memory<br>use | 2.0 pts Full Marks Does correct a manipulation of creating unne arrays, Strings StringBuilders extra memory   | without<br>cessary<br>s,<br>s or other | 1.0 pts Good Does reasonable array manipulation but creates an unecessary array, String, StringBuilder or some unnecessary additional memory use. |   |  | 0.0  <br>No I<br>Is no<br>arra<br>crea<br>unno<br>(or c | 2.0 pts  |         |
| 1D hiddenString:<br>uses the proper<br>API  | 2.0 pts Full Marks Has a loop to traverse the data and does not use any class or method of the API not permitted on the project                                     |  |   |   |  |   |  | 2.0 pts |
| 1D hiddenString:<br>break/continue          | 2.0 pts Full Marks All stopping conditions for the loops (other than method return) in the loop condition, and no use break, continue, or code that mimics a break. |  |   | O.0 pts No Marks No loops to traverse the data OR a loop is present and it uses break, continue, or code that mimics a break. All loop stopping conditions (other than method return) is not in the loop condition. |  |   | 2.0 pts  |         |
| 2D hiddenString:<br>correct<br>performance  | 2.0 pts Full Marks Works on all inputs.  1.0 pts Good Works on the main of or more boundary can   |  |   | o.0 pts No Marks Does not work in a majority of cases.  |  |   | 2.0 pts  |         |
| 2D hiddenString:<br>good code design        | (even if not correct) for pro   |  |   | n but sals of t   | oops/algorithm fo<br>ignificantly more<br>he data than | r the   | 0.0 pts No Marks The algorithm used is not reasonable for the problem. | 2.0 pts |

| Criteria                                    | Ratings   |                               |  |   |   |         |  |  |  |
|---|---|-------------------------------|--|---|---|---------|--|--|--|
| 2D hiddenString:<br>efficient memory<br>use | 2.0 pts Full Marks Does correct array manipulation without creating unnecessary arrays, Strings, StringBuilders or other extra memory usage.    | manipul<br>unecess<br>StringB | lation I<br>sary ar<br>uilder o<br>ssary a | able array<br>but creates an<br>rray, String, or<br>or some<br>additional | 0.0 pts No Marks Is not doing proper array manipulation OR creates many unnecessary arrays (or other) in solving the problem. | 2.0 pts |  |  |  |
| 2D hiddenString:<br>uses the proper<br>API  | 2.0 pts Full Marks Has a loop to traverse the not use any class or method on the projection.  | od of the A                   |  | that is not perm  | r method from the API<br>nitted OR does not have<br>erses the data.   |         |  |  |  |
| 2D hiddenString:<br>break/continue          | 2.0 pts Full Marks All stopping conditions for loops (other than method in the loop condition, and break, continue, or code the mimics a break. | return) is<br>no use of       | •  |   |   |         |  |  |  |
| Code Compiles                               | 0.0 pts<br>Code Compiles  |                               | -10.0<br>Code                              | pts<br>Fails To Compi   | le  | 0.0 pts |  |  |  |

Total Points: 60.0