| Time Analysis | |
| --- | --- |
| Functions | Time Analysis |
| frmStr() | O(n) + O(4p) where n = length of encodeStr, p = number of ‘i’ in encodeStr |
| totalLevels() | O(5) |
| clearImage() | O(n) where n = imageDimension |
| fillImage() | O(n^2) where n= imageDimension / 2^level of node |
| createImage() | O(n) where n = imageDimension |
| printTree() | O(6) + O(4) |
| printImage() | O(n^2) where n= imageDimension |
| compareSquare() | O(n^2) where n= width |
| copySquare() | O(n^2) where n= width |
| sameTree() | O(n) where n= imageDimension / 2^level of node |
| queryTree() | O(2) |
| numBlack() | O(n^2) where n= imageDimension |
| largestRepeat() | O(2) |
| int main() | O(1) |

| Space Analysis | |
| --- | --- |
| Functions | Time Analysis |
| frmStr() | O(l) + kO(4) where l = length of encodeStr, k = number of ‘i’ in encodeStr |
| totalLevels() | O(1) |
| clearImage() | O(1) |
| fillImage() | O(4) |
| createImage() | O(n) where n = imageDimension |
| printTree() | O(4) |
| printImage() | O(1) |
| compareSquare() | O(1)+O(1) |
| copySquare() | O(1) |
| sameTree() | O(2n) where n= imageDimension/2^level |
| queryTree() | O(1) |
| numBlack() | O(1) |
| largestRepeat() | O(1) |
| int main() | O(8) |