**Results:**

I have used the maximum value of P to obtain the maximum value of accuracy.

However, I have tried a variety of k values to compare accuracy when k value changes.

Here are screenshots of the code output that shows classification report using different k values:

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| k | 1 | 3 | 5 | 7 | 9 | 11 | 13 | 15 | 17 | 19 | 21 | 23 | 25 | 27 | 29 |
| Accuracy% | 21 | 25 | 21 | 23 | 22 | 22 | 22 | 20 | 20 | 20 | 19 | 17 | 18 | 20 | 21 |

Obviously, the accuracy ranges between 17 and 25 while changing values of k based on our dataset. However, the best accuracy (25%) was achieved when k=3 while the worst accuracy (17%) was obtained when k=23.