**Challenge 1**

Big Covert:

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# Outputs:

|  |  |
| --- | --- |
| v4:  1. ial-agha > skeeter 2. malvidrez > jennifer 3. raranaga > welcome 4. lbaudouin > horse 5. jberthelot > Daniel 6. jbook > einstein 7. acarr > george 8. acaver > lucky 9. jchoyce > Picard 10. ddigilormo > daisy 11. cdoddigarla > Beaner 12. sdominguez > lauren 13. ddurousseaux > texas 14. meldridge > samson 15. afloyd > Jester 16. cfoster > Speech 17. cgiven > boss 18. bhanzo > andrew 19. kkalla > Jasmine 20. jkety > Pentium 21. jlandry > roger 22. mlevesque > 1234567 23. jmarxsen > jack 24. jmathews > willie 25. amudhish > jason 26. dmunger > maggie 27. ppage > hola 28. rpiraino > carrie 29. spothuraju > steve 30. crice > Steven 31. erobinson > monica 32. nrobles > Griffey 33. jruppel > canada 34. aschoonmaker > nicholas 35. csmith > einstein 36. bvessel > donna 37. syoung > elvis 38. Great job > 123123 39. on makin > Justin 40. g it this > tammy 41. far. Obv > Jackson 42. iously, y > cowboys 43. our code > betty 44. works. If > info 45. you incl > Viking 46. ude the s > 654321 47. tring "Th > boss 48. e word qu > alexande 49. eue is li > Bubba 50. ke a grou > Mickey 51. p project > goober 52. where on > jesus1 53. e letter > scott 54. does all > Jessica 55. the work. > Lakers 56. " at the > Speech 57. very bott > green 58. om of you > Hornets 59. r PDF doc > sanjose1 60. ument, yo > Sierra 61. u will ea > daisy 62. rn a few > Shotgun 63. extra poi > charles 64. nts on th > eric 65. is challe > Anthony 66. nge! Hope > anna 67. fully you > Global 68. read thi > America 69. s... > picture | v5:  1. ial-agha > Jessie 2. malvidrez > dave 3. raranaga > lestat 4. lbaudouin > cricket 5. jberthelot > natasha 6. jbook > steelers 7. acarr > Charlie 8. acaver > Cheese 9. jchoyce > stimpy 10. ddigilormo > christy 11. cdoddigarla > andrea 12. sdominguez > rosebud 13. ddurousseaux > Panther 14. meldridge > wilson 15. afloyd > lestat 16. cfoster > wolf 17. cgiven > matt 18. bhanzo > dog 19. kkalla > logan 20. jkety > lizard 21. jlandry > Hunting 22. mlevesque > Abcdefg 23. jmarxsen > grover 24. jmathews > sydney 25. amudhish > foobar 26. dmunger > dennis 27. ppage > linda 28. rpiraino > 1 29. spothuraju > daniel 30. crice > mike 31. erobinson > picture 32. nrobles > lizard 33. jruppel > virginia 34. aschoonmaker > batman 35. csmith > brandy 36. bvessel > Groovy 37. syoung > Spanky |

# Challenge Summary

The challenge began with distributing our efforts. The group split between deciphering the usernames and brute-forcing the password hashes for the version 4 database. Knowing that a ROT cipher had been applied to the names, we tested random encoded usernames in [https://www.dcode.fr/rot-cipher](https://www.dcode.fr/caesar-cipher) until we recognized that a ROT-1 cipher produced a recognizable output. We then tried applying that to code and successfully produced a function to decipher the obfuscated usernames. Meanwhile, the other two members of the group had outlined the entirety of the cracking program, but were having some difficulty successfully producing any matching hashes. In order to not waste time, the team’s efforts were transitioned to the version 5 database. The second half of the challenge proved incredibly easy compared to the first part. The main difference presented itself as swapping sha256 hashing for a bcrypt hash checking function. Upon realizing that cracking the bcrypt hashes would take a significant amount of time, Brandon improved it to allow for multithreaded cracking. This significantly reduced the computation time from over 10 minutes to almost 1! All the information in both databases was successfully deobfuscated/cracked and the secret message hidden in the v4 database was also discovered.

Output from 47-55 from v4 (Bonus):

**The word queue is like a group project where one letter does all the work.**