```
                    start

           prediction=0
           guess=0

              rand(number)

    A[1]=number DIV 1000
    A[2]=(number- A[1]*1000) DIV 100
    A[3]=(number-A[1]*1000-A[2]*100) DIV 10
    A[4]=(number - A[1]*1000-A[2]*100-A[3]*10)

              guess!=number

              STOP          "Guess the 4-digit
                             number"

                            guess

    B[1]=guess DIV 1000
    B[2]=(guess - B[1]*1000) DIV 100
    B[3]=(guess -B[1]*1000-B[2]*100) DIV 10
    B[4]=(guess - B[1]*1000-B[2]*100-B[3]*10)
    prediction=prediction+1
    plus=0
    minus=0

         i  ←  1     1
                4

                                          j  ←  1    1
                                                  4

    False    plus=4    True              False    A[i]=B[j]    True

    False  plus=0  True    "Congrats :) You did it! number of
                            total predictions:",predictions
                                                  False    i=j    True

    False  minus=0  True    False  minus=0  True

                                              minus=minus+1      plus=plus+1

  "hint: +",plus ,"-",minus   "hint: +",plus   "hint: -",minus   "hint:0 "
```

# ANALİZ

## Örnek 1:

| random number | guess | i | j | plus | minus | prediction | A[1] | A[2] | A[3] | A[4] | B[1] | B[2] | B[3] | B[4] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1537 | 0 | - | - | - | - | 0 | 1 | 5 | 3 | 7 | - | - | - | - |
| 1537 | 2957 | 1 | 1 | 0 | 0 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 1 | 2 | 0 | 0 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 1 | 3 | 0 | 0 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 1 | 4 | 0 | 0 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 2 | 1 | 0 | 0 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 2 | 2 | 0 | 0 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 2 | 3 | 0 | 1 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 2 | 4 | 0 | 1 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 3 | 1 | 0 | 1 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 3 | 2 | 0 | 1 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 3 | 3 | 0 | 1 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 3 | 4 | 0 | 1 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 4 | 1 | 0 | 1 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 4 | 2 | 0 | 1 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 4 | 3 | 0 | 1 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| 1537 | 2957 | 4 | 4 | 1 | 1 | 1 | 1 | 5 | 3 | 7 | 2 | 9 | 5 | 7 |
| | | | | | | | | | | | | | | |
| 1537 | 1537 | 4 | 4 | 0 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 1 | 1 | 1 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 1 | 2 | 1 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 1 | 3 | 1 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 1 | 4 | 1 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 2 | 1 | 1 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 2 | 2 | 2 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 2 | 3 | 2 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 2 | 4 | 2 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 3 | 1 | 2 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 3 | 2 | 2 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 3 | 3 | 3 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 3 | 4 | 3 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 4 | 1 | 3 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 4 | 2 | 3 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 4 | 3 | 3 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |
| 1537 | 1537 | 4 | 4 | 4 | 0 | 2 | 1 | 5 | 3 | 7 | 1 | 5 | 3 | 7 |

## Örnek *2:*

| random number | guess | i | j | plus | minus | prediction | A[1] | A[2] | A[3] | A[4] | B[1] | B[2] | B[3] | B[4] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4912 | 0 | - | - | - | - | 0 | 4 | 9 | 1 | 2 | - | - | - | - |
| 4912 | 4186 | 1 | 1 | 1 | 0 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 1 | 2 | 1 | 0 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 1 | 3 | 1 | 0 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 1 | 4 | 1 | 0 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 2 | 1 | 1 | 0 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 2 | 2 | 1 | 0 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 2 | 3 | 1 | 0 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 2 | 4 | 1 | 0 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 3 | 1 | 1 | 0 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 3 | 2 | 1 | 1 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 3 | 3 | 1 | 1 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 3 | 4 | 1 | 1 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 4 | 1 | 1 | 1 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 4 | 2 | 1 | 1 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 4 | 3 | 1 | 1 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| 4912 | 4186 | 4 | 4 | 1 | 1 | 1 | 4 | 9 | 1 | 2 | 4 | 1 | 8 | 6 |
| | | | | | | | | | | | | | | |
| 4912 | 4912 | 4 | 4 | 0 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 1 | 1 | 1 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 1 | 2 | 1 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 1 | 3 | 1 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 1 | 4 | 1 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 2 | 1 | 1 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 2 | 2 | 2 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 2 | 3 | 2 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 2 | 4 | 2 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 3 | 1 | 2 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 3 | 2 | 2 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 3 | 3 | 3 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 3 | 4 | 3 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 4 | 1 | 3 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 4 | 2 | 3 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 4 | 3 | 3 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |
| 4912 | 4912 | 4 | 4 | 4 | 0 | 2 | 4 | 9 | 1 | 2 | 4 | 9 | 1 | 2 |

## Örnek 3:

| random number | guess | i | j | plus | minus | prediction | A[1] | A[2] | A[3] | A[4] | B[1] | B[2] | B[3] | B[4] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7189 | 0 | - | - | - | - | 0 | 7 | 1 | 8 | 9 | - | - | - | - |
| 7189 | 9871 | 1 | 1 | 0 | 0 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 1 | 2 | 0 | 0 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 1 | 3 | 0 | 1 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 1 | 4 | 0 | 1 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 2 | 1 | 0 | 1 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 2 | 2 | 0 | 1 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 2 | 3 | 0 | 1 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 2 | 4 | 0 | 2 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 3 | 1 | 0 | 2 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 3 | 2 | 0 | 3 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 3 | 3 | 0 | 3 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 3 | 4 | 0 | 3 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 4 | 1 | 0 | 4 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 4 | 2 | 0 | 4 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 4 | 3 | 0 | 4 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
| 7189 | 9871 | 4 | 4 | 0 | 4 | 1 | 7 | 1 | 8 | 9 | 9 | 8 | 7 | 1 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7189 | 7189 | 4 | 4 | 0 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 1 | 1 | 1 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 1 | 2 | 1 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 1 | 3 | 1 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 1 | 4 | 1 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 2 | 1 | 1 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 2 | 2 | 2 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 2 | 3 | 2 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 2 | 4 | 2 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 3 | 1 | 2 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 3 | 2 | 2 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 3 | 3 | 3 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 3 | 4 | 3 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 4 | 1 | 3 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 4 | 2 | 3 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 4 | 3 | 3 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |
| 7189 | 7189 | 4 | 4 | 4 | 0 | 2 | 7 | 1 | 8 | 9 | 7 | 1 | 8 | 9 |