H·K

KAPREKAR NUMBER

To solve the Kaprekar number problems, you need to identify if a given number n satisfies the properties of a Kaprekar number :

1. Square the number n to get n^2.
2. Split n^2 into two parts : left and right.
3. Add the left and right parts. If the sum is equal to n, the n is a Karpekar number.

// Function to count digit

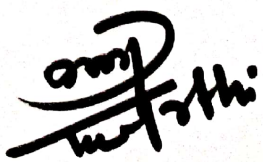
```
int countDigits (int n) {
    int count = 0;
    while (n>0) {
        count++;
        n /= 10;
    }
    return count;
}
```

// Function to check if a number is Kaprekar Number

```
int isKapNum (int n) {
    if (n==1) return 1;

    int square = (int) n*n;
    int numDigits = countDigits (square);

    int divisor = 1
    for (int i=1 ; i<numDigits ; i++) {
        divisor = divisor * 10;
        int left = square / divisor ;
        int right = square % divisor;
    if (left+right == n && right!=0) {
        return 1;
    }
    }
    return 0;
}
```



```
// Function to print and find Kapprekar Numbers

void findKapRekarNumber(int start, int end) {
    printf("Kaprekar Numbers b/w %d and %d are:\n", start, end);

    int found = 0;
    for (int i = start; i <= end; i++) {
        if (isKaprekarNumber(i)) {
            printf("%d", i);
            found = 1;
        }
    }
    if (!found) {
        printf("No Kaprekar number found in this range\n");
    }
    printf("\n");
}

int main()
    int start = 1, end = 100;
    find KapRekarNumber(start, end);
    return 0;
}
```