

```
#include <stdio.h>
```

```
#include <string.h>
```

```
#include <stdlib.h>
```

```
int main(){
```

```
    char number_string[100];
```

```
    int number_array[100];
```

```
    int count = 0;
```

```
    int trial;
```

```
    char self_describing = 'T';
```

```
    printf("Enter number: ");
```

```
scanf("%s", number_string);
```

```
trial = strlen(number_string);
```

```
for (int a = 0; a < trial; a++) {
```

```
    number_array[a] = number_string[a] - '0';
```

```
}
```

```
for (int a = 0; a < trial; a++) {
```

```
    printf("There are %d %ds in the number \n", number_array[a],a);
```

```
}
```

```
for (int n = 0; n < trial; n++) {
```

```
    for (int i = 0; i < trial; i++) {
```

```
        if (number_array[i] == n) count++;

    }

    if(count == number_array[n]){

        self_describing = 'T';

    }

    else{

        self_describing = 'F';

        printf("\n");

        printf("Not self-describing\n");

        break;

    }

    count = 0;

    if (self_describing != 'F'){
```

```
printf("\n");
```

```
printf("Self-describing\n");
```

```
break;
```

```
}
```

```
}
```

```
}
```