Fonksiyonlar II

Suhap SAHIN
Onur GÖK

Fonksiyon Prototipi

```c
#include <stdio.h>
int max(int s1, int s2);
int min(int s1, int s2);
int main() {
    int a, b;
    printf("iki sayi girin: ");;
    scanf("%d %d", &a, &b);
    printf("sayilardan kucuk olan: %d\n", min(a, b));
    printf("sayilardan buyuk olan: %d\n", max(a, b));
    return 0;
}
int max(int s1, int s2) {
    if (s1 > s2)
        return s1;
    else
        return s2;
}
int min(int s1, int s2) {
    if (s1 < s2)
        return s1;
    else
        return s2;
}
```

Palindromik Sayılar

11

121

75257

1234321

Palindromik Sayılar

```c
#include <stdio.h>

int main() {
    int sayi;
    printf("sayi girin:");
    scanf("%d", &sayi);



    return 0;
}
```

11

121

75257

1234321

Palindromik Sayılar

```c
#include <stdio.h>
int tersini_bul(int x);
int main() {
    int sayi;
    printf("sayi girin:");
    scanf("%d", &sayi);



    return 0;
}
```

11

121

75257

1234321

Palindromik Sayılar

```c
#include <stdio.h>
int tersini_bul(int x);
int main() {
    int sayi;
    printf("sayi girin:");
    scanf("%d", &sayi);
    if (sayi == tersini_bul(sayi))
        printf("sayi palindromik sayidir");
    else
        printf("degildir");
    return 0;
}
```

11

121

75257

1234321

Palindromik Sayılar

```c
#include <stdio.h>
int tersini_bul(int x);
int main() {
    int sayi;
    printf("sayi girin:");
    scanf("%d", &sayi);
    if (sayi == tersini_bul(sayi))
        printf("sayi palindromik sayidir");
    else
        printf("degildir");
    return 0;
}
int tersini_bul(int x) {









}
```

11

121

75257

1234321

Palindromik Sayılar

```
int tersini_bul(int x) {
    int S = 0;
    while (x > 0) {
        int b = x % 10;
        S = (S * 10) + b;
        x /= 10;
    }
    return S;
}
```

S = 32 | x = 1 | b = 2

b = 1 % 10

S = 32 | x = 1 | b = 1

S = 32 * 10 + 1

S = 321 | x = 1 | b = 1

x /= 10

S = 321 | x = 0.1 | b = 1

OBEB & OKEK

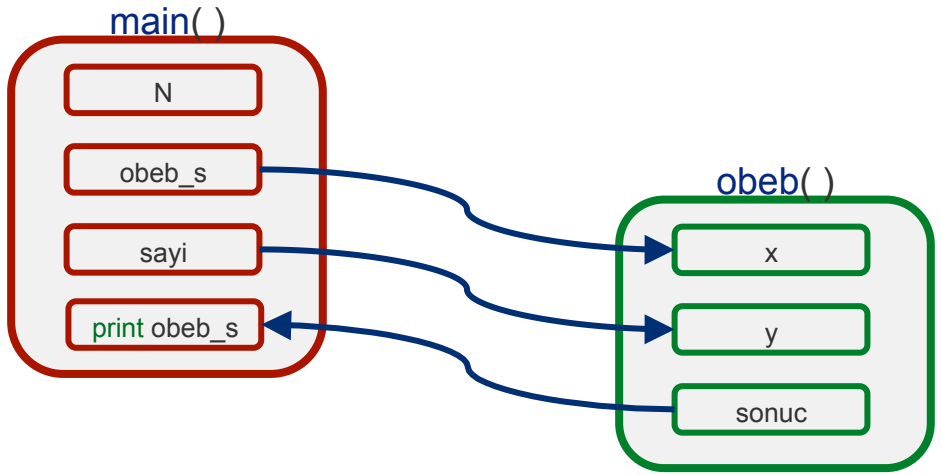
```c
#include <stdio.h>
int obeb(int x, int y);
int sayi_oku();
int main() {
    int N, i;
    int obeb_s; // ebob isleminin sonucu
    printf("kac sayi gireceksiniz: ");
    scanf("%d", &N);
    obeb_s = sayi_oku();
    printf("yeni obeb: %d\n", obeb_s);
    for (i = 2 ; i <= N ; i++) {
        int sayi = sayi_oku();
        obeb_s = obeb(obeb_s, sayi);
        printf("yeni obeb: %d\n", obeb_s);
    }
    printf("sonuc: %d\n", obeb_s);
    return 0;
}
int sayi_oku() {



}
int obeb(int x, int y) {



}
```



OBEB & OKEK

```c
int sayi_oku() {
    int x;
    printf("sayi girin: ");
    scanf("%d", &x);
    return x;
}
int obeb(int x, int y) {
    int i;
    int sonuc = 1;
    for (i = 2 ; i <= x && i <= y ; i++) {
        if (x % i == 0 && y % i == 0)
            sonuc = i;
    }
    return sonuc;
}
```

x = 6 | y = 9 | sonuc = 1

i = 2 | 6 % 2 == 0 | 9 % 2 == 1

x = 6 | y = 9 | sonuc = 1

i = 3 | 6 % 3 == 0 | 9 % 3 == 0

x = 6 | y = 9 | sonuc = 3

i = 4 | 6 % 4 == 4 | 9 % 4 == 1

x = 6 | y = 9 | sonuc = 3

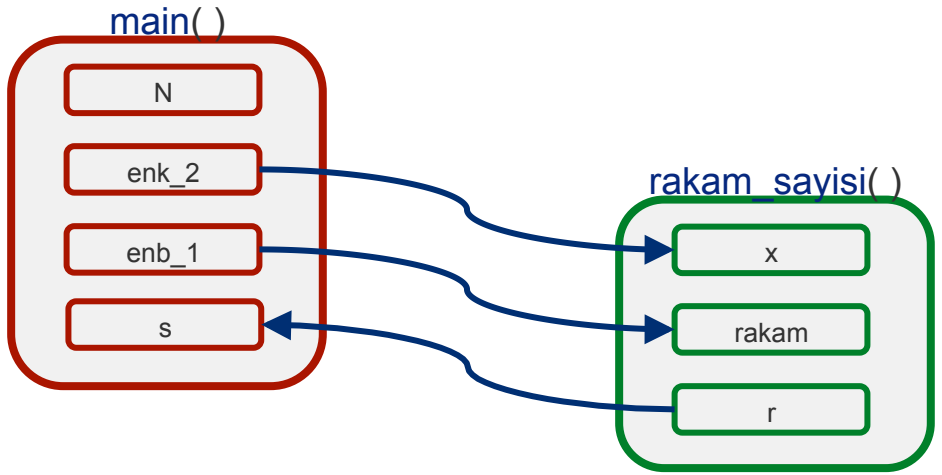
i = 5 | 6 % 5 == 5 | 9 % 5 == 4

x = 6 | y = 9 | sonuc = 3

i = 6 | 6 % 6 == 0 | 9 % 6 == 3

Rakam Sayısı

```c
#include <stdio.h>
int rakam_sayisi(int x, int rakam);
int sayi_oku();
int main() {
    int N, i;
    printf("kac sayi gireceksiniz:");
    scanf("%d", &N);
    int s = sayi_oku();
    int enk_2 = s;
    int enb_1 = s;
    for (i = 1 ; i < N ; i++) {
        int s = sayi_oku();
        if (rakam_sayisi(s, 1) > rakam_sayisi(enb_1, 1))
            enb_1 = s;
        if (rakam_sayisi(s, 2) < rakam_sayisi(enk_2, 2))
            enk_2 = s;
    }
    printf("en fazla 1 olan: %d\n", enb_1);
    printf("en az 2 olan: %d\n", enk_2);
}
int rakam_sayisi(int x, int rakam) {
```




```c
    return r;
}
int sayi_oku() {
    int r;
    printf("sayi girin:");
    scanf("%d", &r);
    return r;
}
```

Rakam Sayısı

```
int rakam_sayisi(int x, int rakam) {
    int r = 0;
    while (x > 0) {
            if (x % 10 == rakam)
                    r += 1;
            x /= 10;
    }
    return r;
}
```

	x = 123	rakam = 1	r = 0
123 > 0	123 % 10 == 3		x /== 10
	x = 12	rakam = 1	r = 0
12 > 0	12 % 10 == 2		x /== 10
	x = 1	rakam = 1	r = 0
1 > 0	1 % 10 == 1	r = 0 + 1	1 /== 10
	x = 0.1	rakam = 1	r = 1
0.1 > 0			

Rastgele Sayı Üretme

```c
#include <stdio.h>
#include <stdlib.h>
#include <time.h>
int main() {
    int x, i;
    // program her basladiginda sayinin degismesi icin
    srand(time(NULL));
    x = rand() % 5 ;                                    // [0, 5)
arasi
    printf("%d\n", x);
    x = 10 + rand() % 90;                    // [10, 99] arasi
    printf("%d\n", x);
    for(i=1;i<=5;i++) {          // [1,6] arasi 5 tane sayi uret
        x=1+ rand()%6;
        printf("%d. sayi = %d \n",i,x);
    }
    return 0;
}
```

Rastgele Sayı Üretme

rand(): Üst limit en az 32767'dir.

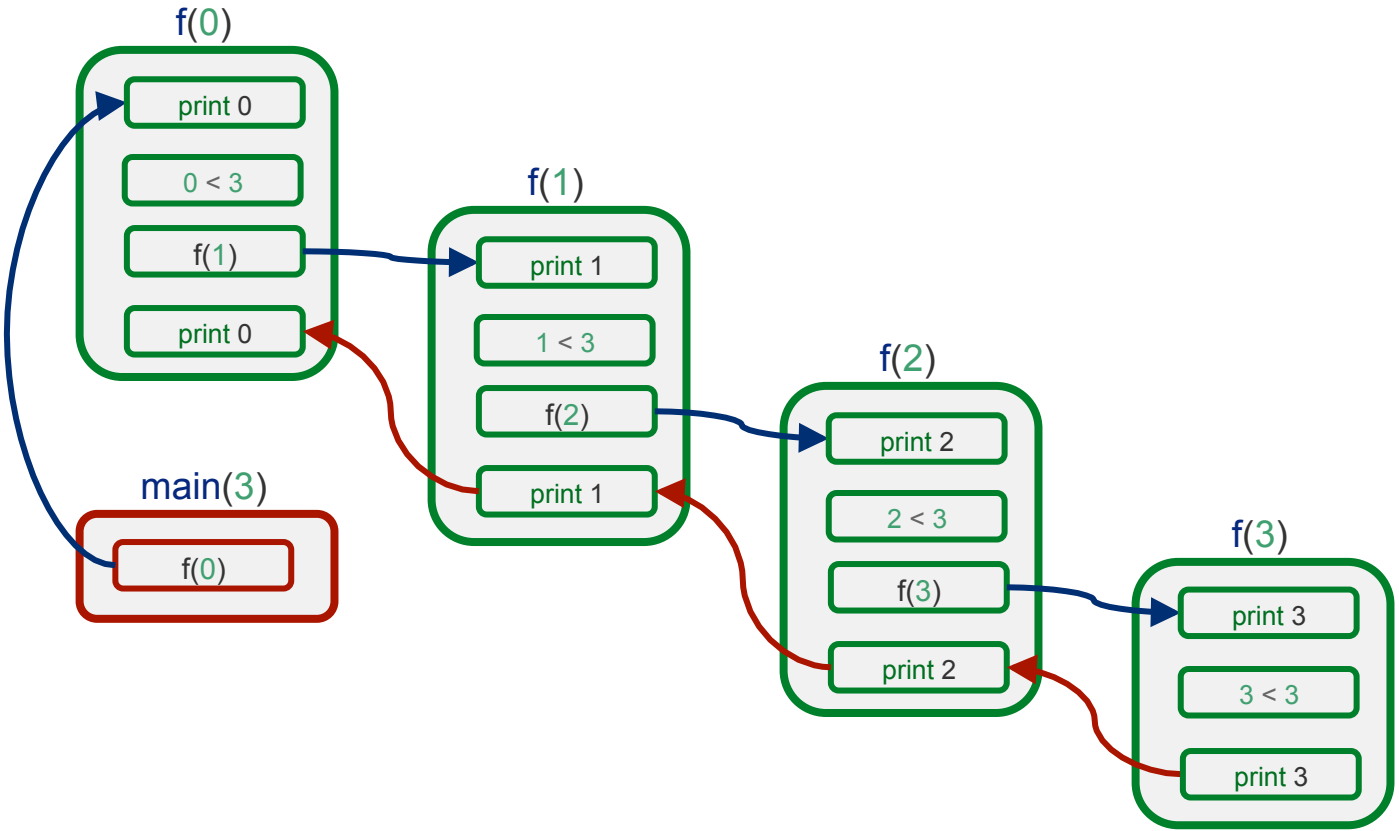
rand() % N -> [0,N)

rand() % 10 -> [0,10)

10 + rand() % (100-10) -> [10,100)

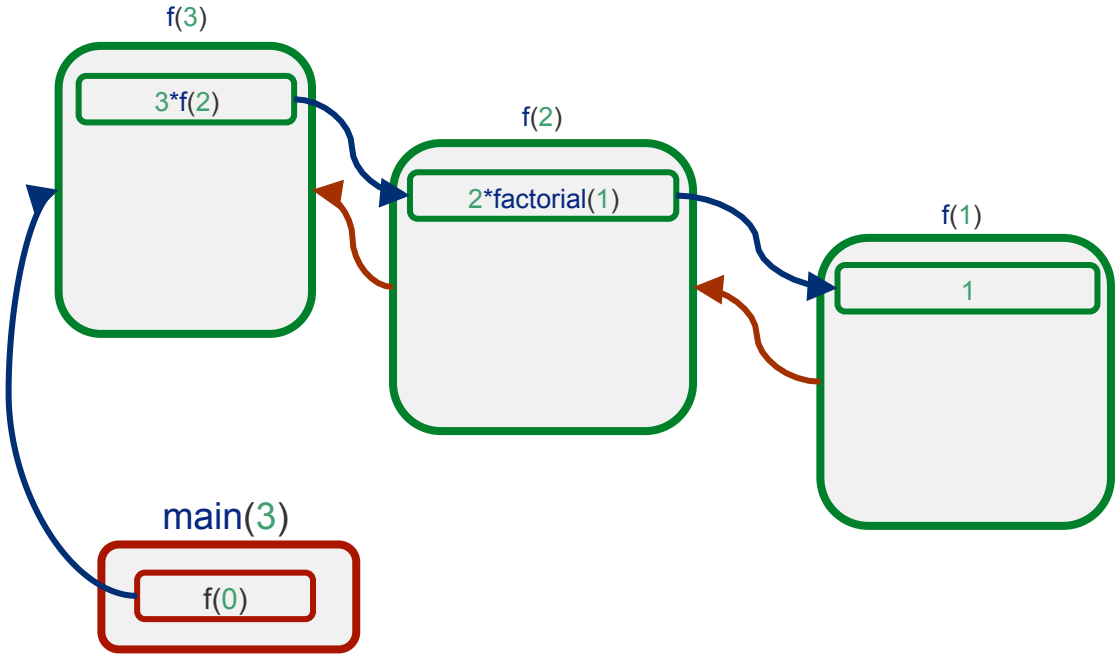
Recursive

```c
#include <stdio.h>
void f(int sayi);
int main() {
    f(0);
    return 0;
}
void f(int sayi) {
    printf("%d\n", sayi);
    if (sayi < 3)
        f(sayi + 1);
    printf("%d\n", sayi);
}
```



Faktöriyel

```c
#include <stdio.h>
int f(int x);
int main() {
        int sonuc = f(3);
        printf("3! = %d\n", sonuc);
        return 0;
}
int f(int x) {
        if (x == 1)
                return 1;
        else
                return x * f(x-1);
}
```



Sorular