IPPL Week 3

Dikerjakan oleh :
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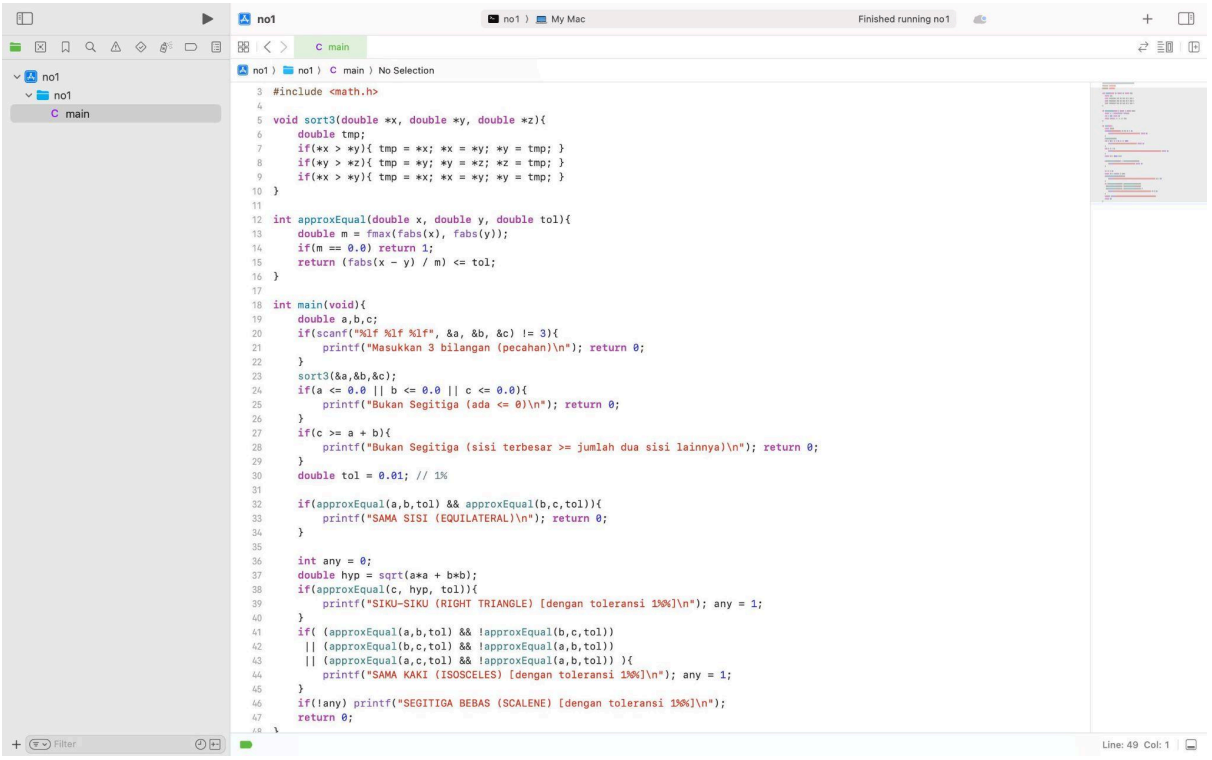
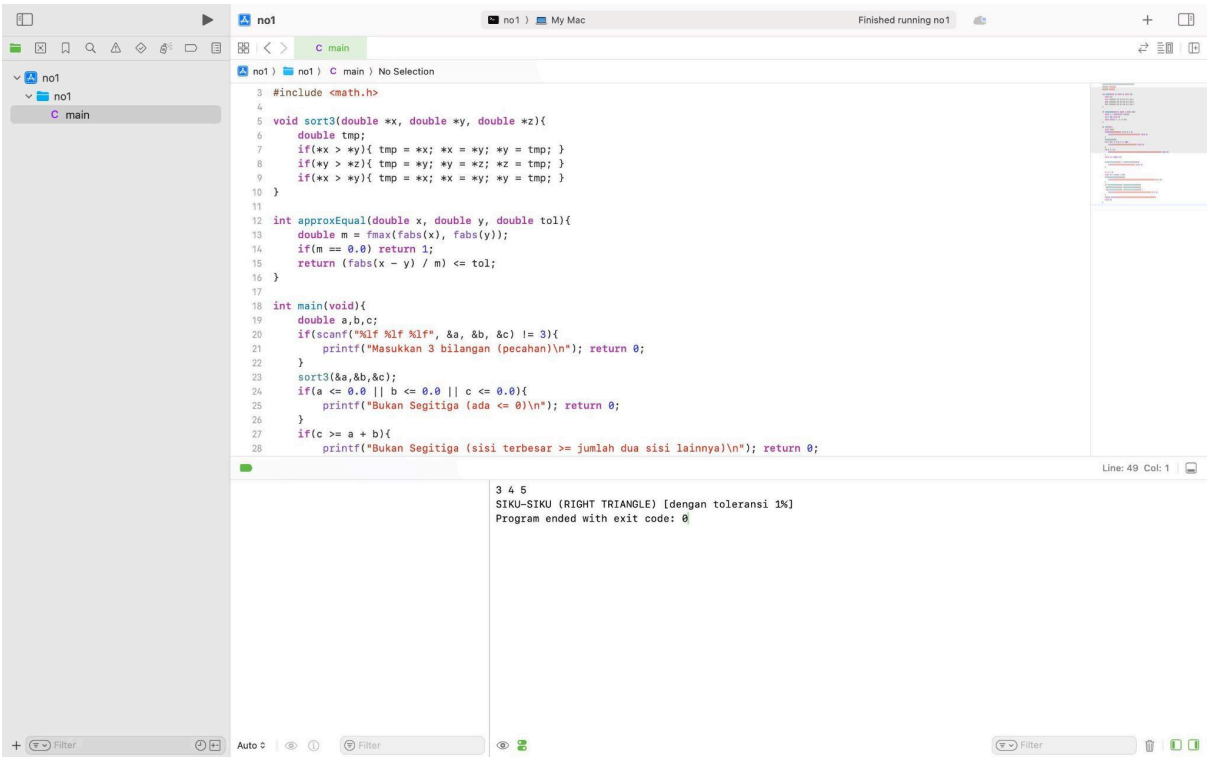
No.1

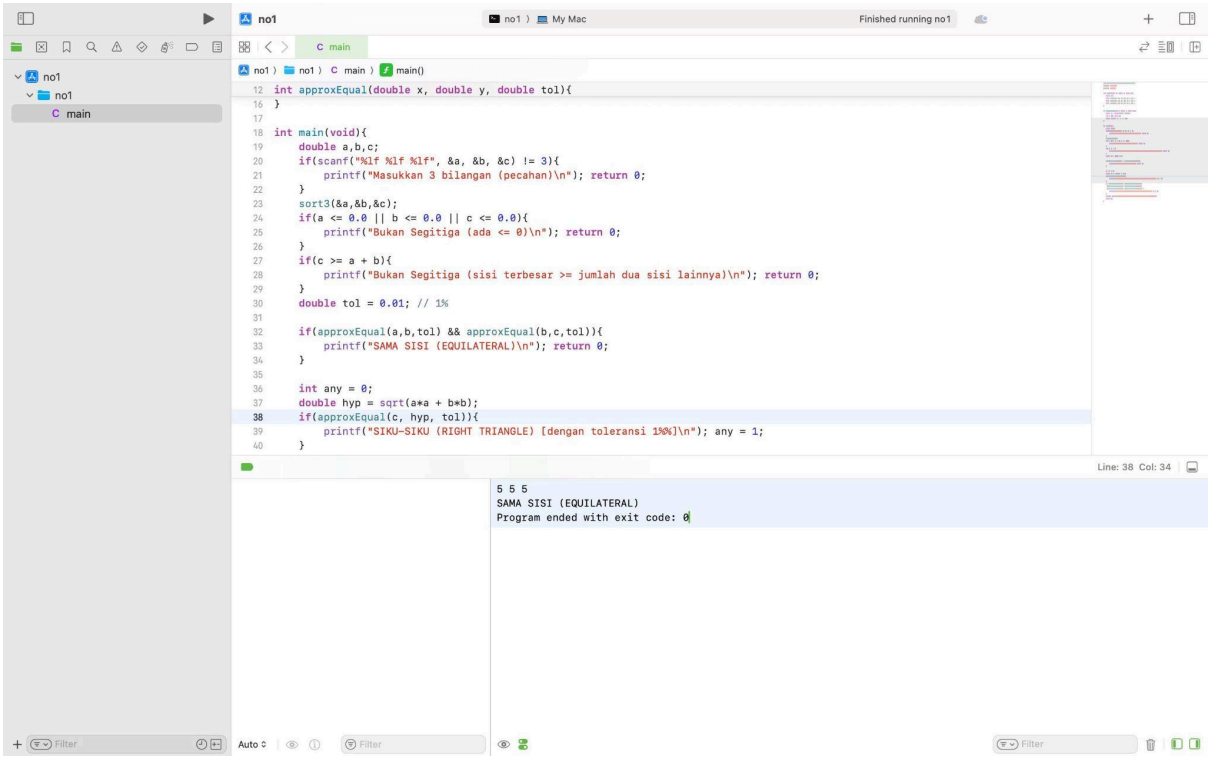


```c
#include <math.h>

void sort3(double *x, double *y, double *z){
    double tmp;
    if(*x > *y){ tmp = *x; *x = *y; *y = tmp; }
    if(*y > *z){ tmp = *y; *y = *z; *z = tmp; }
    if(*x > *y){ tmp = *x; *x = *y; *y = tmp; }
}

int approxEqual(double x, double y, double tol){
    double m = fmax(fabs(x), fabs(y));
    if(m == 0.0) return 1;
    return (fabs(x - y) / m) <= tol;
}

int main(void){
    double a,b,c;
    if(scanf("%lf %lf %lf", &a, &b, &c) != 3){
        printf("Masukkan 3 bilangan (pecahan)\n"); return 0;
    }
    sort3(&a,&b,&c);
    if(a <= 0.0 || b <= 0.0 || c <= 0.0){
        printf("Bukan Segitiga (ada <= 0)\n"); return 0;
    }
    if(c >= a + b){
        printf("Bukan Segitiga (sisi terbesar >= jumlah dua sisi lainnya)\n"); return 0;
    }
    double tol = 0.01; // 1%

    if(approxEqual(a,b,tol) && approxEqual(b,c,tol)){
        printf("SAMA SISI (EQUILATERAL)\n"); return 0;
    }

    int any = 0;
    double hyp = sqrt(a*a + b*b);
    if(approxEqual(c, hyp, tol)){
        printf("SIKU-SIKU (RIGHT TRIANGLE) [dengan toleransi 1%%]\n"); any = 1;
    }
    if( (approxEqual(a,b,tol) && !approxEqual(b,c,tol))
     || (approxEqual(b,c,tol) && !approxEqual(a,b,tol))
     || (approxEqual(a,c,tol) && !approxEqual(a,b,tol)) ){
        printf("SAMA KAKI (ISOSCELES) [dengan toleransi 1%%]\n"); any = 1;
    }
    if(!any) printf("SEGITIGA BEBAS (SCALENE) [dengan toleransi 1%%]\n");
    return 0;
}
```

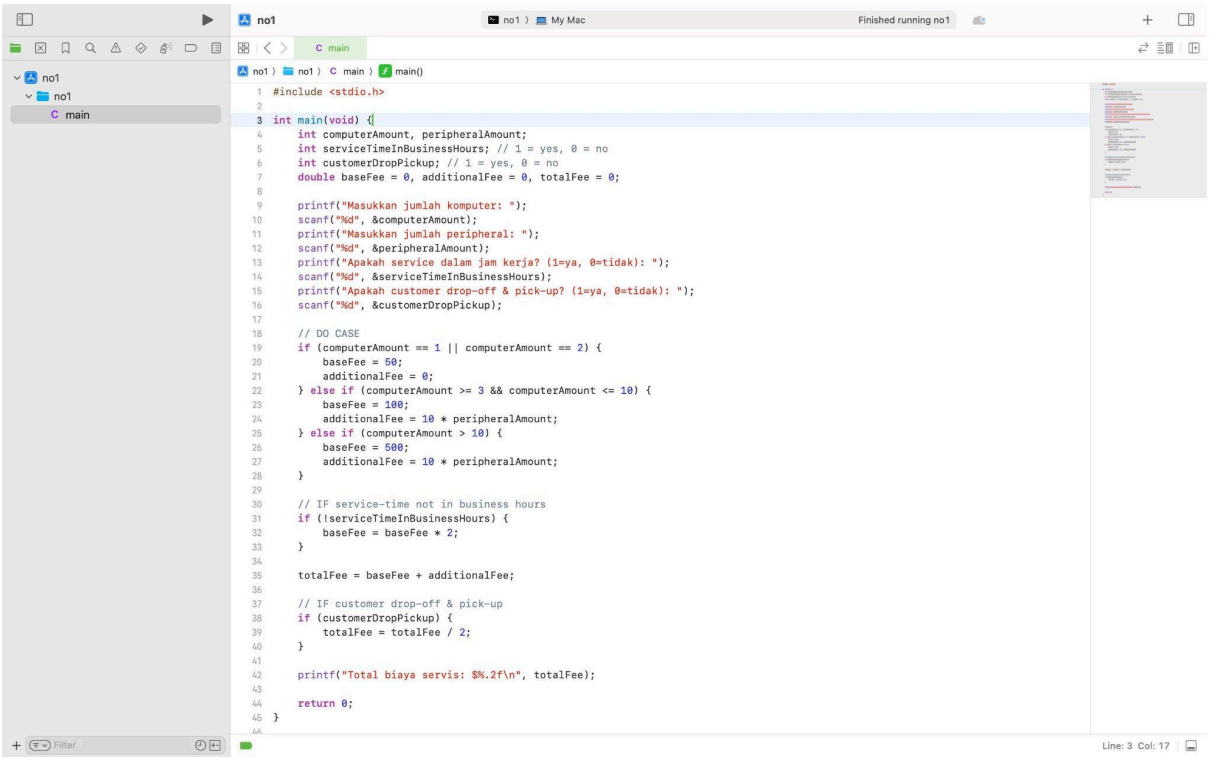


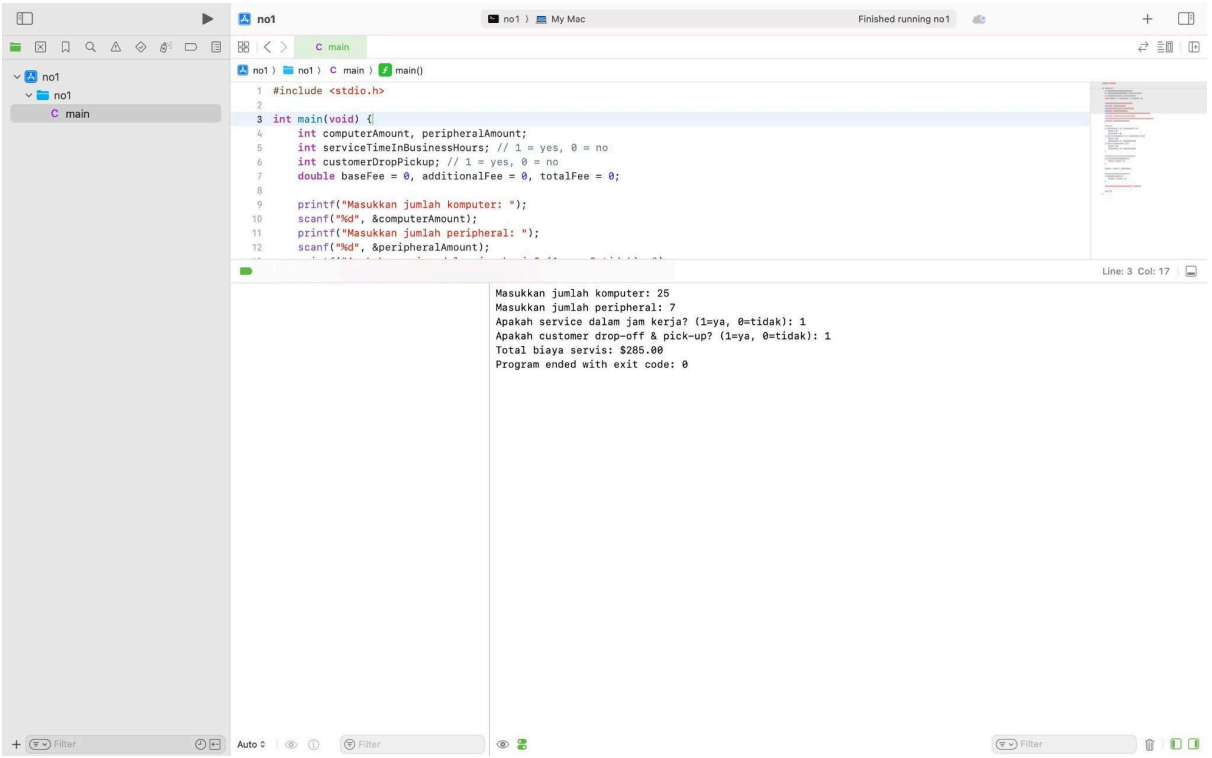
```c
#include <math.h>

void sort3(double *x, double *y, double *z){
    double tmp;
    if(*x > *y){ tmp = *x; *x = *y; *y = tmp; }
    if(*y > *z){ tmp = *y; *y = *z; *z = tmp; }
    if(*x > *y){ tmp = *x; *x = *y; *y = tmp; }
}

int approxEqual(double x, double y, double tol){
    double m = fmax(fabs(x), fabs(y));
    if(m == 0.0) return 1;
    return (fabs(x - y) / m) <= tol;
}

int main(void){
    double a,b,c;
    if(scanf("%lf %lf %lf", &a, &b, &c) != 3){
        printf("Masukkan 3 bilangan (pecahan)\n"); return 0;
    }
    sort3(&a,&b,&c);
    if(a <= 0.0 || b <= 0.0 || c <= 0.0){
        printf("Bukan Segitiga (ada <= 0)\n"); return 0;
    }
    if(c >= a + b){
        printf("Bukan Segitiga (sisi terbesar >= jumlah dua sisi lainnya)\n"); return 0;
```

```
3 4 5
SIKU-SIKU (RIGHT TRIANGLE) [dengan toleransi 1%]
Program ended with exit code: 0
```

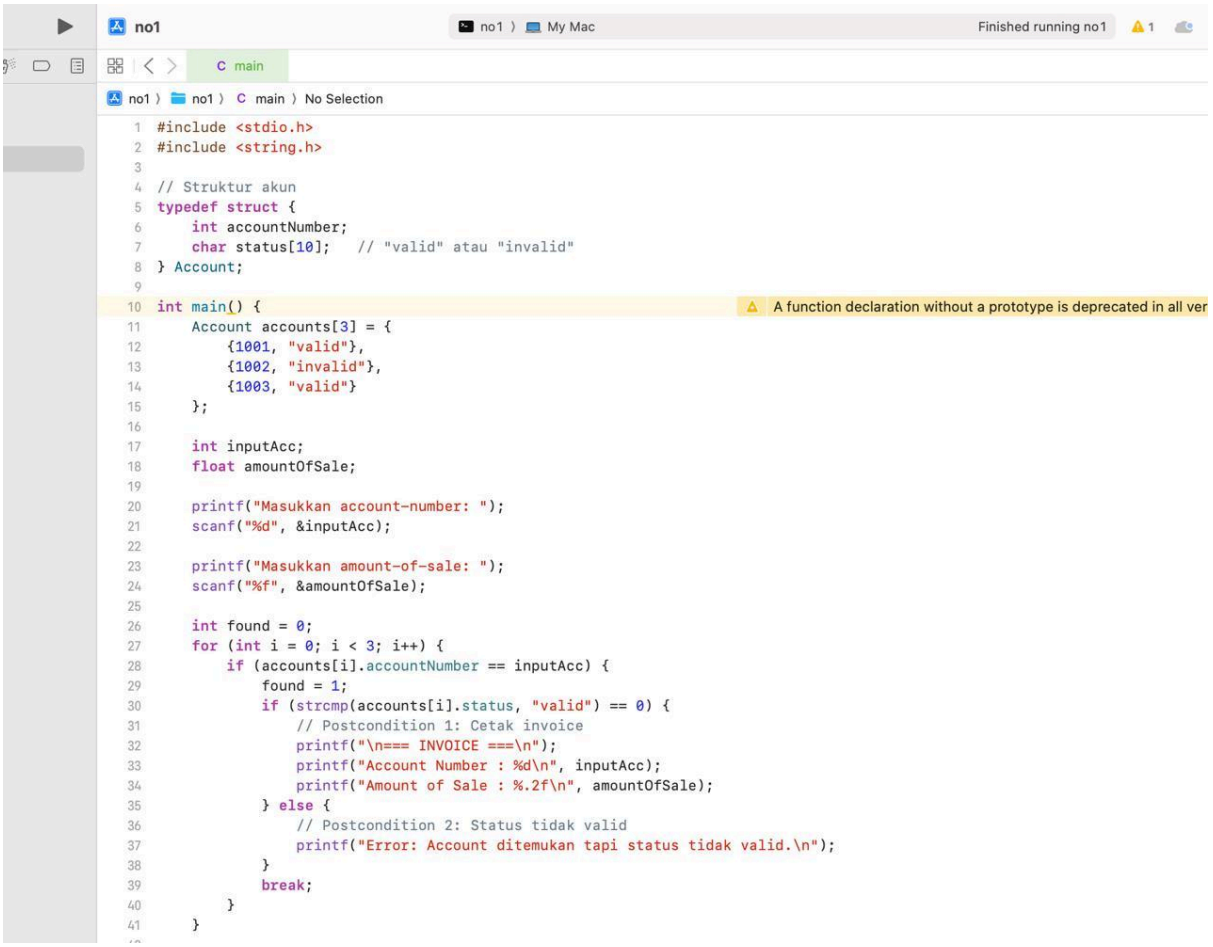

no1
no1) My Mac
Finished running no1
C main
no1) no1) C main) main()
no1
no1
main
int approxEqual(double x, double y, double tol){
}
int main(void){
double a,b,c;
if(scanf("%lf %lf %lf", &a, &b, &c) != 3){
printf("Masukkan 3 bilangan (pecahan)\n"); return 0;
}
sort3(&a,&b,&c);
if(a <= 0.0 || b <= 0.0 || c <= 0.0){
printf("Bukan Segitiga (ada <= 0)\n"); return 0;
}
if(c >= a + b){
printf("Bukan Segitiga (sisi terbesar >= jumlah dua sisi lainnya)\n"); return 0;
}
double tol = 0.01; // 1%
if(approxEqual(a,b,tol) && approxEqual(b,c,tol)){
printf("SAMA SISI (EQUILATERAL)\n"); return 0;
}
int any = 0;
double hyp = sqrt(a*a + b*b);
if(approxEqual(c, hyp, tol)){
printf("SIKU-SIKU (RIGHT TRIANGLE) [dengan toleransi 1%%]\n"); any = 1;
}
Line: 38 Col: 34
5 5 5
SAMA SISI (EQUILATERAL)
Program ended with exit code: 0
Filter
Auto
Filter
Filter

No.2

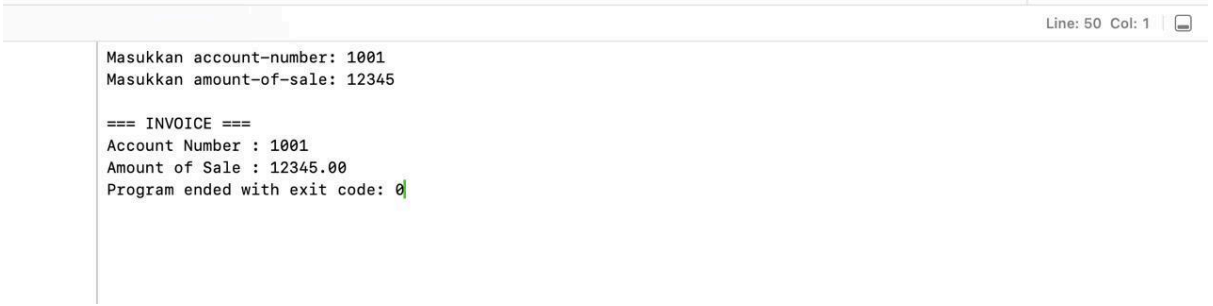

no1
no1) My Mac
Finished running no1
main
no1
no1
main
no1) no1) main) main()
#include <stdio.h>
int main(void) {
int computerAmount, peripheralAmount;
int serviceTimeInBusinessHours; // 1 = yes, 0 = no
int customerDropPickup; // 1 = yes, 0 = no
double baseFee = 0, additionalFee = 0, totalFee = 0;
printf("Masukkan jumlah komputer: ");
scanf("%d", &computerAmount);
printf("Masukkan jumlah peripheral: ");
scanf("%d", &peripheralAmount);
printf("Apakah service dalam jam kerja? (1=ya, 0=tidak): ");
scanf("%d", &serviceTimeInBusinessHours);
printf("Apakah customer drop-off & pick-up? (1=ya, 0=tidak): ");
scanf("%d", &customerDropPickup);
// DO CASE
if (computerAmount == 1 || computerAmount == 2) {
baseFee = 50;
additionalFee = 0;
} else if (computerAmount >= 3 && computerAmount <= 10) {
baseFee = 100;
additionalFee = 10 * peripheralAmount;
} else if (computerAmount > 10) {
baseFee = 500;
additionalFee = 10 * peripheralAmount;
}
// IF service-time not in business hours
if (!serviceTimeInBusinessHours) {
baseFee = baseFee * 2;
}
totalFee = baseFee + additionalFee;
// IF customer drop-off & pick-up
if (customerDropPickup) {
totalFee = totalFee / 2;
}
printf("Total biaya servis: $%.2f\n", totalFee);
return 0;
}
Line: 3 Col: 17
Filter


no1
no1) My Mac
Finished running no1
main
no1
no1
main
no1) no1) main) main()
#include <stdio.h>
int main(void) {
int computerAmount, peripheralAmount;
int serviceTimeInBusinessHours; // 1 = yes, 0 = no
int customerDropPickup; // 1 = yes, 0 = no
double baseFee = 0, additionalFee = 0, totalFee = 0;
printf("Masukkan jumlah komputer: ");
scanf("%d", &computerAmount);
printf("Masukkan jumlah peripheral: ");
scanf("%d", &peripheralAmount);
Line: 3 Col: 17
Masukkan jumlah komputer: 25
Masukkan jumlah peripheral: 7
Apakah service dalam jam kerja? (1=ya, 0=tidak): 1
Apakah customer drop-off & pick-up? (1=ya, 0=tidak): 1
Total biaya servis: $285.00
Program ended with exit code: 0
Auto
Filter
Filter
Filter

No3.



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

// Struktur akun
typedef struct {
    int accountNumber;
    char status[10];   // "valid" atau "invalid"
} Account;

int main() {
    Account accounts[3] = {
        {1001, "valid"},
        {1002, "invalid"},
        {1003, "valid"}
    };

    int inputAcc;
    float amountOfSale;

    printf("Masukkan account-number: ");
    scanf("%d", &inputAcc);

    printf("Masukkan amount-of-sale: ");
    scanf("%f", &amountOfSale);

    int found = 0;
    for (int i = 0; i < 3; i++) {
        if (accounts[i].accountNumber == inputAcc) {
            found = 1;
            if (strcmp(accounts[i].status, "valid") == 0) {
                // Postcondition 1: Cetak invoice
                printf("\n=== INVOICE ===\n");
                printf("Account Number : %d\n", inputAcc);
                printf("Amount of Sale : %.2f\n", amountOfSale);
            } else {
                // Postcondition 2: Status tidak valid
                printf("Error: Account ditemukan tapi status tidak valid.\n");
            }
            break;
        }
    }

    if (!found) {
        // Postcondition 2: Account tidak ditemukan
        printf("Error: Account tidak ditemukan!\n");
    }

    return 0;
}
```



Link GITHUB: https://github.com/Dina272727/Kelompok_impal/