

MA 511: Computer Programming

Lecture 20

http://www.iitg.ernet.in/psm/indexing_ma511/y08/index.html

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Semester 1, 2008-09

Mon 10:00-10:55 Tue 11:00-11:55 Fri 9:00-9:55 Class: 1G2

MA512 Lab : Wed 14:00-16:55

Example: Data files

```
typedef struct {
    int acct_no;
    char acct_type;
    char name[80];
    float balance;
}record;
record readData(record cust);
void writeToFile(record cust);
FILE *fp1;
```

```
main(){
    int i;
    record customer;
    fp1 = fopen("file.dat", "w");
    if(fp1==NULL)
        printf("Error for opening a file\n");
    else{
        while(1){
            printf("Type 0 (zero) to stop ");
            scanf("%d", &i);
            if(i==0) break;
            customer= readData(customer);
            writeToFile(customer);
        }
    }
    fclose(fp1);
}
```

```
record readData(record cust){
    scanf(" %[^\n]", cust.name);
    scanf(" %d",&cust.acct_no);
    scanf(" %c",cust.acct_type);
    scanf(" %f",&cust.balance);
    return(cust);
}

void writeToFile(record cust){
    fprintf(fp1, "%s\n", cust.name);
    fprintf(fp1, "%d\n", cust.acct_no);
    fprintf(fp1, "%c\n", cust.acct_type);
    fprintf(fp1, "%.2f\n", cust.balance);
}
```

Unformatted data files

- fread fwrite: are called unformatted read write functions follows:
 - Read an entire block from data file or write the entire block to a data file.
 - Function required four arguments:
 - A pointer to the data block
 - The size of the data block
 - No of the data block being transferred
 - Stream pointer (File pointer)

```
fwrite(&customer, sizeof(record), 1, fp1);
```

```
fread(&customer, sizeof(record), 1, fp1);
```

Unformatted data files

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    float balance;
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        printf("Error for opening a file\n");
    else{
        while(1){
            printf("Type 0 (zero) to stop ");
            scanf("%d", &i);
            if(i==0) break;
            customer= readData(customer);
            // writeToFile(customer);
            fwrite(&customer, sizeof(record), 1, fp1);
            strset(customer.name, ' ');
            strset(customer.acct_type, ' ');
        }
    }
    fclose(fp1);
}
```

```
record readData(record cust){
    scanf(" %[^\n]", cust.name);
    scanf(" %d",&cust.acct_no);
    scanf(" %c",cust.acct_type);
    scanf(" %f",&cust.balance);
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void writeToFile(record cust){
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