#include <iostream>

#include <string.h>

using namespace std;

void output();

void searching();

void sorting ();

void id();

void harga();

FILE \*m0;

struct data1{

int harga,kodetrans,id,surat;

char namatrans[100],warnatrans[100];

}transp[1000],temp;

int kode,a,y;

char jawab,jawab1,answer;

int main()

{

do

{

cout<<"++++++++++++++++++++++MENU JUAL TRANSPORT++++++++++++++++++++++"<<endl;

cout<<"Penggunaan kode : "<<endl;

cout<<"100 = Motor\n"<<"200 = Mobil\n"<<"300 = Bis\n"<<"400 = Truck\n";

cout<<"Kelengkapan Surat : "<<endl;

cout<<"3 = STNK & BPKB\n"<<"2 = BPKB\n"<<"1 = STNK\n"<<"0 = Tanpa Surat\n\n";

cout<<"Menu =\n"<<"1. Input Data\n"<<"2. Output Data\n"<<"3. Search Data \n"<<"4. List Data Terurut\n"<<"5. Keluar Program\n";

cout<<"Masukkan kode menu = ";cin>>kode;

switch (kode)

{

case 1:

cout<<"++++++++++++++++++++++INPUT DATA++++++++++++++++++++++"<<endl;

m0 = fopen("umum.txt","wb");

cout<<"Masukkan jumlah data yang ingin diinput = ";cin>>y;

fwrite(&y,sizeof(y),1,m0);

for(a=0;a<y;a++)

{

cout<<"Data ke - "<<a+1<<endl;

cout<<"Kode Transportasi = ";cin>>transp[a].kodetrans;

cout<<"Nama Transportasi = ";cin.ignore();cin.getline(transp[a].namatrans,100);

cout<<"ID Transportasi = ";cin>>transp[a].id;

cout<<"Warna Transportasi = ";cin>>transp[a].warnatrans;

cout<<"Kelengkapan Surat = ";cin>>transp[a].surat;

cout<<"Harga = ";cin>>transp[a].harga;

fwrite(&transp[a],sizeof(transp[a]),1,m0);

}

fclose(m0);

cout<<"Apakah anda ingin kembali ke menu awal ? (y/n)";

cin>>jawab;

//system("cls");

if (jawab=='n')

cout<<"Terima Kasih Telah Menggunakan Program";

break;

case 2:

output();

cout<<"Apakah anda ingin kembali ke menu awal ? (y/n)";

cin>>jawab;

//system("cls");

if (jawab=='n')

cout<<"Terima Kasih Telah Menggunakan Program";

break;

case 3:

searching();

cout<<"Apakah anda ingin kembali ke menu awal ? (y/n)";

cin>>jawab;

//system("cls");

if (jawab=='n')

cout<<"Terima Kasih Telah Menggunakan Program";

break;

case 4:

sorting();

cout<<"Apakah anda ingin kembali ke menu awal ? (y/n)";

cin>>jawab;

//system("cls");

if (jawab=='n')

cout<<"Terima Kasih Telah Menggunakan Program";

break;

case 5 :

cout<<"Anda yakin ingin keluar ? (y/n)";

cin>>answer;

system("cls");

if (answer=='y')

cout<<"Terima Kasih Telah Menggunakan Program";

break;

default:

cout<<"Kode yang anda masukkan salah !";

}

}while (jawab=='y'||answer=='n');

}

void output()

{

cout<<"++++++++++++++++++++++OUTPUT DATA++++++++++++++++++++++"<<endl;

m0 = fopen("umum.txt","r");

fread(&y,sizeof(y),1,m0);

for(int x=0;x<y;x++)

{

fread(&transp[x],sizeof(transp[x]),1,m0);

cout<<"Kode Transportasi = "<<transp[x].kodetrans<<endl;

cout<<"Nama Transportasi = "<<transp[x].namatrans<<endl;

cout<<"ID Transportasi = "<<transp[x].id<<endl;

cout<<"Warna Transportasi = "<<transp[x].warnatrans<<endl;

cout<<"Kelengkapan Surat = "<<transp[x].surat<<endl;

cout<<"Harga = "<<transp[x].harga<<endl<<endl;

}

fclose(m0);

}

//typedef enum boolean {false=0,true=1};

void searching()

{

int kode2,cari\_kode,i,j,cari\_harga;

string cari\_warna;

char jawab2;

cout<<"++++++++++++++++++++++SEARCHING DATA++++++++++++++++++++++"<<endl;

do

{

j=0;

cout<<"Menu Searching = \n"<<"1. Warna Transportasi\n"<<"2. Kode Transportasi\n";

cout<<"3. Harga\n"<<"4. Nama\n";

cout<<"Masukkan kode = ";cin>>kode2;

switch (kode2)

{

case 1:

m0 = fopen("umum.txt","r");

fread(&y,sizeof(y),1,m0);

cout<<"<<Searching Warna>>"<<endl;

cout<<"Masukkan Warna yang dicari = ";cin.ignore(); getline(cin,cari\_warna);

for(int x=0;x<y;x++)

{

fread(&transp[x],sizeof(transp[x]),1,m0);

}

//found=false;

i=0;

while (i<y)

{

if (transp[i].warnatrans==cari\_warna)

{

cout<<"Kode Transportasi = "<<transp[i].kodetrans<<endl;

cout<<"Nama Transportasi = "<<transp[i].namatrans<<endl;

cout<<"ID Transportasi = "<<transp[i].id<<endl;

cout<<"Warna Transportasi = "<<transp[i].warnatrans<<endl;

cout<<"Kelengkapan Surat = "<<transp[i].surat<<endl;

cout<<"Harga = "<<transp[i].harga<<endl<<endl;

i++;

j=j+1;

}

else

i=i+1;

}

if(j==0)

cout<<"Data tidak ditemukan";

fclose(m0);

cout<<"Apakah anda ingin searching data lagi ? (y/n)";cin>>jawab2;

break;

case 2:

m0 = fopen("umum.txt","r");

fread(&y,sizeof(y),1,m0);

cout<<"<<Searching Kode>>"<<endl;

cout<<"Masukkan Kode yang dicari = ";cin>>cari\_kode;

for(int x=0;x<y;x++)

{

fread(&transp[x],sizeof(transp[x]),1,m0);

}

transp[y].kodetrans=cari\_kode;

i=0;

while (i<y)

{

if (transp[i].kodetrans==cari\_kode)

{

cout<<"Kode Transportasi = "<<transp[i].kodetrans<<endl;

cout<<"Nama Transportasi = "<<transp[i].namatrans<<endl;

cout<<"ID Transportasi = " <<transp[i].id<<endl;

cout<<"Warna Transportasi = "<<transp[i].warnatrans<<endl;

cout<<"Kelengkapan Surat = "<<transp[i].surat<<endl;

cout<<"Harga = "<<transp[i].harga<<endl<<endl;

i++;

j=j+1;

}

else

i++;

}

if(j==0 && i>y)

cout<<"Data tidak ditemukan";

fclose(m0);

cout<<"Apakah anda ingin searching data lagi ? (y/n)";cin>>jawab2;

break;

case 3:

m0 = fopen("umum.txt","r");

fread(&y,sizeof(y),1,m0);

cout<<"<<Searching Harga>>"<<endl;

cout<<"Masukkan batas harga maksimum = ";cin>>cari\_harga;

for(int x=0;x<y;x++)

{

fread(&transp[x],sizeof(transp[x]),1,m0);

}

for(int z=0;z<y;z++)

{

if(transp[z].harga<=cari\_harga)

{

cout<<"Kode Transportasi = "<<transp[z].kodetrans<<endl;

cout<<"Nama Transportasi = "<<transp[z].namatrans<<endl;

cout<<"ID Transportasi = "<<transp[z].id<<endl;

cout<<"Warna Transportasi = "<<transp[z].warnatrans<<endl;

cout<<"Kelengkapan Surat = "<<transp[z].surat<<endl;

cout<<"Harga = "<<transp[z].harga<<endl<<endl;

j++;

}

}

if(j==0)

cout<<"Data tidak ditemukan";

fclose(m0);

cout<<"Apakah anda ingin searching data lagi ? (y/n)";cin>>jawab2;

break;

case 4:

m0 = fopen("umum.txt","r");

fread(&y,sizeof(y),1,m0);

for(int x=0;x<y;x++)

{

fread(&transp[x],sizeof(transp[x]),1,m0);

}

data1 temp,sort[100];

for(int x=0;x<y;x++)

{

sort[x] = transp[x];

}

for(int a=0; a<y-1; a++){

for(int b=0; b<y-1-a; b++){

if(transp[b].namatrans > transp[b+1].namatrans){

temp = transp[b];

transp[b] = transp[b+1];

transp[b+1] = temp;

}

}

}

for(int z=0; z<y; z++){

cout<<"Nama Transportasi = "<<transp[z].namatrans<<endl;

}

for(int z=0; z<y; z++){

cout<<"Kode Transportasi = "<<sort[z].kodetrans<<endl;

cout<<"Nama Transportasi = "<<sort[z].namatrans<<endl;

cout<<"ID Transportasi = "<<sort[z].id<<endl;

cout<<"Warna Transportasi = "<<sort[z].warnatrans<<endl;

cout<<"Kelengkapan Surat = "<<sort[z].surat<<endl;

cout<<"Harga = "<<sort[z].harga<<endl<<endl;

}

fclose(m0);

break;

}

}

while(jawab2=='y' || jawab2=='Y');

}

void sorting ()

{ int kode;

cout <<"List Data Terurut Secara Ascending "<<endl;

cout <<"Berdasarkan : " <<endl;

cout <<"1. ID Transportasi(shell sort)" <<endl;

cout <<"2. Harga(straight insertion)" <<endl;

cout <<"Pilih Kode :";cin>>kode;

switch (kode)

{

case 1:

{

id();

}

break;

case 2:

{

harga();

}

}

}

void id()

{

cout <<"TERURUT BERDASARKAN ID TRANSPORTASI"<<endl;

int i=0,j=0,k=0,tengah=0;

for(k=y/2;k>0;k/=2)

{

for(j=k;j<y;j++)

{

for(i=j-k;i>=0;i-=k)

{

if (transp[i+k].id>=transp[i].id)

{

break;

}

else

{

temp=transp[i];

transp[i]=transp[i+k];

transp[i+k]=temp;

}

}

}

}

for(int z=0; z<y; z++)

{

cout<<"Kode Transportasi = "<<transp[z].kodetrans<<endl;

cout<<"Nama Transportasi = "<<transp[z].namatrans<<endl;

cout<<"ID Transportasi = "<<transp[z].id<<endl;

cout<<"Warna Transportasi = "<<transp[z].warnatrans<<endl;

cout<<"Kelengkapan Surat = "<<transp[z].surat<<endl;

cout<<"Harga = "<<transp[z].harga<<endl<<endl;

}

}

void harga()

{int current,j;

for (current =0;current<y;current++)

{

for (j=current+1`;j<y;j++)

{

if(transp[current].harga>transp[current].harga)

{temp=transp[current];

transp[current]=transp[j];

transp[j]=temp;

}

}

}

for(int z=0; z<y; z++)

{

cout<<"Kode Transportasi = "<<transp[z].kodetrans<<endl;

cout<<"Nama Transportasi = "<<transp[z].namatrans<<endl;

cout<<"ID Transportasi = "<<transp[z].id<<endl;

cout<<"Warna Transportasi = "<<transp[z].warnatrans<<endl;

cout<<"Kelengkapan Surat = "<<transp[z].surat<<endl;

cout<<"Harga = "<<transp[z].harga<<endl<<endl;

}

}