#include <iostream>

#include <conio.h>

#include <stdio.h>

#include <cstdlib>

using namespace std;

int pil;

void pilih();

void buat\_baru();

void Input\_awal();

void input\_belakang();

void sisip\_tengah();

void hapus\_depan();

void hapus\_tengah();

void lihat\_data();

struct peminjaman

{

string buku = "";

int tglp;

int tglk;

peminjaman \*prev, \*next;

};

peminjaman \*baru, \*awal=NULL, \*akhir=NULL,\*hapus,\*bantu,\*bantu2;

int main()

{

do

{

system("cls");

cout<< " -- Daftar Harga Buku Pinjam -- \n";

cout<< " ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~\n";

cout<< " | 1. Saintek | Rp.3500/hari |\n";

cout<< " | 2. Agama | Rp.2000/hari |\n";

cout<< " | 3. Cerita Anak-anak | Rp.1500/hari |\n";

cout<< " | 4. Novel | Rp.2500/hari |\n";

cout<< " | 5. Komik | Rp.2500/hari |\n";

cout<< " ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~\n";

cout<< "\n"<<endl;

cout<< " >> Menu Pilihan << "<<endl;

cout<< " ------------------------\n";

cout<< " 1. Input Awal \n";

cout<< " 2. Input Belakang \n";

cout<< " 3. Sisip tengah \n";

cout<< " 4. Hapus depan \n";

cout<< " 5. Hapus tengah \n";

cout<< " 6. Lihat semua data \n";

cout<< " ------------------------\n";

cout<< " Pilih menu : ";

cin>>pil;

cout<<endl;

pilih();

}

while(pil!=8);

}

void pilih()

{

if(pil==1)

Input\_awal();

else if(pil==2)

input\_belakang();

else if(pil==3)

sisip\_tengah();

else if(pil==4)

hapus\_depan();

else if(pil==5)

hapus\_tengah();

else if(pil==6)

lihat\_data();

else

cout<<"selesai";

}

void buat\_baru()

{

baru = new(peminjaman);

cout<< " Input Buku Pinjam : ";

cin>>baru->buku;

cout<< " Input Tanggal Pinjam : ";

cin>>baru->tglp;

cout<< " Input Tanggal Kembali : ";

cin>>baru->tglk;

baru->prev=NULL;

baru->next=NULL;

}

void Input\_awal()

{

buat\_baru();

if(awal==NULL)

{

awal=baru;

akhir=baru;

}

else

{

baru->next=awal;

awal->prev=baru;

awal=baru;

}

cout<<endl<<endl;

lihat\_data();

}

void input\_belakang()

{

buat\_baru();

if(awal==NULL)

{

awal=baru;

akhir=baru;

}

else

{

akhir->next=baru;

baru->prev=akhir;

akhir=baru;

}

cout<<endl<<endl;

lihat\_data();

}

void sisip\_tengah()

{

int sisip;

cout<< " Masukkan Posisi Sisip : ";

cin>>sisip;

bantu=awal;

for(int i=1; i<sisip-1; i++)

{

bantu=bantu->next;

}

buat\_baru();

bantu2=bantu->next;

bantu->next=baru;

baru->prev=bantu;

baru->next=bantu2;

bantu2->prev=baru;

}

void hapus\_depan()

{

if (awal==NULL)

cout<< " Data Kosong!!!";

else if (awal->next==NULL)

{

hapus=awal;

awal=NULL;

akhir=NULL;

delete hapus;

}

else

{

hapus=awal;

awal=hapus->next;

awal->prev=NULL;

delete hapus;

}

cout<<endl<<endl;

lihat\_data();

}

void hapus\_tengah()

{

int hap;

cout<<" Masukkan Posisi hapus : ";

cin>>hap;

bantu=awal;

for(int i=1; i<hap-1; i++)

{

bantu=bantu->next;

}

hapus=bantu->next;

bantu2=hapus->next;

bantu->next=hapus->next;

bantu2->prev=bantu;

delete hapus;

}

void lihat\_data()

{

if (awal==NULL)

cout<< " Data Kosong!!!";

else

{

bantu=awal;

while(bantu!=NULL)

{

cout<<" Buku Pinjam : "<<bantu->buku<<endl;

cout<<" Tanggal Pinjam : "<<bantu->tglp<<endl;

cout<<" Tanggal Kembali : "<<bantu->tglk<<endl;

cout<< " ------------------------\n";

if(bantu->tglk>bantu->tglp){

if(bantu->tglk-bantu->tglp>7){

cout<< " Anda meminjam buku selama "<<bantu->tglk-bantu->tglp<< " hari"<<endl;

if(bantu->buku=="saintek"){

cout<< " Denda Rp."<<(bantu->tglk-bantu->tglp-7)\*3500<<",-"<<endl;

}

else if(bantu->buku=="agama"){

cout<< " Denda Rp."<<(bantu->tglk-bantu->tglp-7)\*2000<<",-"<<endl;

}

else if(bantu->buku=="cerita"){

cout<< " Denda Rp."<<(bantu->tglk-bantu->tglp-7)\*1500<<",-"<<endl;

}

else if(bantu->buku=="novel"){

cout<< " Denda Rp."<<(bantu->tglk-bantu->tglp-7)\*2500<<",-"<<endl;

}

else if(bantu->buku=="komik"){

cout<< " Denda Rp."<<(bantu->tglk-bantu->tglp-7)\*2500<<",-"<<endl;

}else{

cout<< " Inputan Buku Salah \n";

}

cout<<endl;

}else{

cout<< " Anda meminjam buku selama "<<bantu->tglk-bantu->tglp<< " hari"<<endl;

cout<< " Denda Rp.0,- \n"<<endl;

cout<<endl;

}

}else{

if(30-bantu->tglp+bantu->tglk>7){

cout<< " Anda meminjam buku selama "<<30-bantu->tglp+bantu->tglk<< " hari"<<endl;

if(bantu->buku=="saintek"){

cout<< " Denda Rp."<<((30-bantu->tglp+bantu->tglk)-7)\*3500<<",-"<<endl;

}

else if(bantu->buku=="agama"){

cout<< " Denda Rp."<<((30-bantu->tglp+bantu->tglk)-7)\*2000<<",-"<<endl;

}

else if(bantu->buku=="cerita"){

cout<< " Denda Rp."<<((30-bantu->tglp+bantu->tglk)-7)\*1500<<",-"<<endl;

}

else if(bantu->buku=="novel"){

cout<< " Denda Rp."<<((30-bantu->tglp+bantu->tglk)-7)\*2500<<",-"<<endl;

}

else if(bantu->buku=="komik"){

cout<< " Denda Rp."<<((30-bantu->tglp+bantu->tglk)-7)\*2500<<",-"<<endl;

}else{

cout<< " Inputan Buku Salah \n";

}

cout<<endl;

}else{

cout<< " Anda meminjam buku selama "<<30-bantu->tglp+bantu->tglk<< " hari"<<endl;

cout<< " Denda Rp.0,- \n";

cout<<endl;

}

}

bantu=bantu->next;

}

}

getch();

}