Assignment 1: Write a c++ Program to emulate CPU architecture, develop register ALU level GUI to display result.

#include<graphics.h>

#include<conio.h>

#include<iostream.h>

Class cpu

{

public:

void drawcpu()

{

rectangle(100,50,220,90); //internal memory

outtextxy(100,70,"internal memory");

rectangle(100,120,220,380); //cpu

outtextxy(110,130,"cpu");

line(150,90,150,120);//connection cpu to internal memory

line(170,90,170,120);

rectangle(0,250,60,310);//input devices

outtextxy(0,260,"input");

outtextxy(2,280,"devices");

line(60,270,100,270);

line(60,290,100,290);

rectangle(270,250,330,310); //output devices

outtextxy(275,260,"output");

outtextxy(275,280,"devices");

line(220,270,270,270);

line(220,290,270,290);

rectangle(110,170,165,230); //control unit

outtextxy(110,180,"control");

outtextxy(110,200,"unit");

rectangle(170,170,210,230); //alu

outtextxy(180,180,"alu");

rectangle(110,270,210,310); //memory

outtextxy(120,280,"memory");

rectangle(110,310,170,350); //register

outtextxy(110,320,"register");

rectangle(170,310,210,350); //cache

outtextxy(170,320,"cache");

rectangle(100,410,220,450); //external memory

outtextxy(100,420,"external memory");

line(150,380,150,410);

line(170,380,170,410);

}

};

void main()

{

cpu c;

intgd=DETECT,gm;

initgraph(&gd,&gm,"c:\\tc\\bgi");

c.drawcpu();

getch();

closegraph();

}

Output:

