Menggambar Obyek 2D

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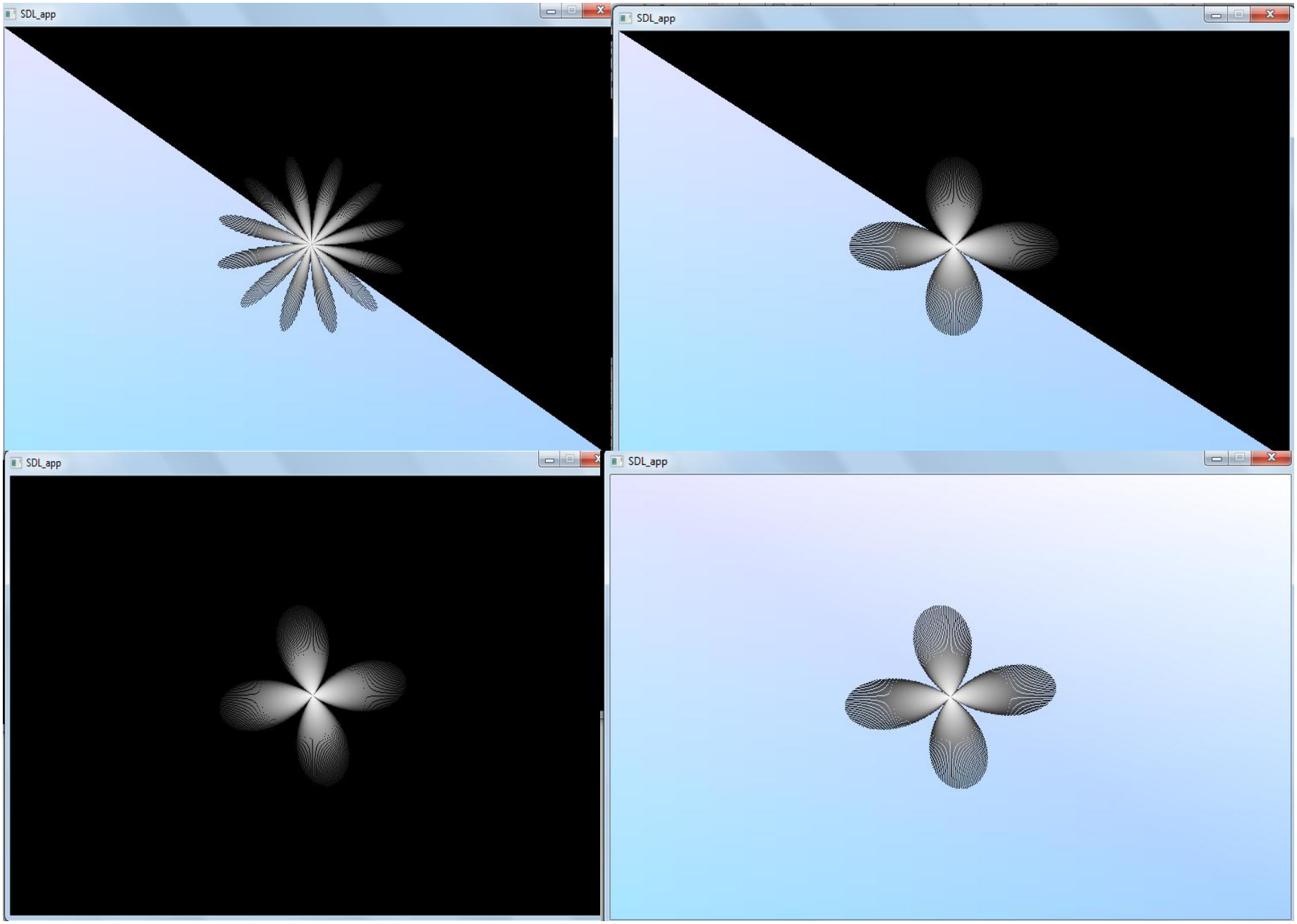
Benda Berputar

BUNGA BERPUTAR


SDL_app
SDL_app
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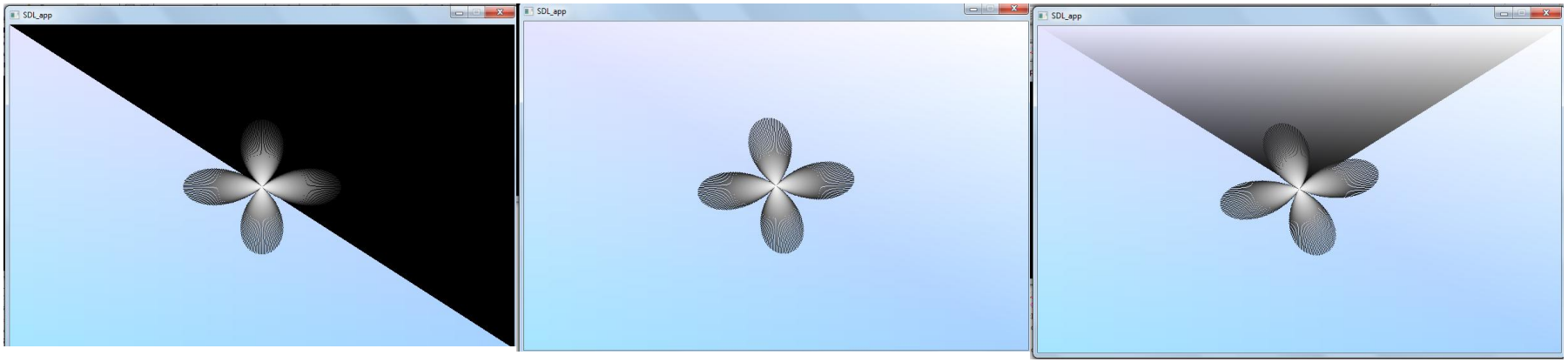
Membuat Background dari Polygon

```
point2D_t langit[4]={{-320.,240.},{-320.,-240.},{320.,-240.},{320.,240.}};
point2D_t pusat={0.,0.};
gradatePolygon(langit,biru,5);

// gradatePolygon(langit,biru,3);
// gradatePolygon(langit,biru,4);
```

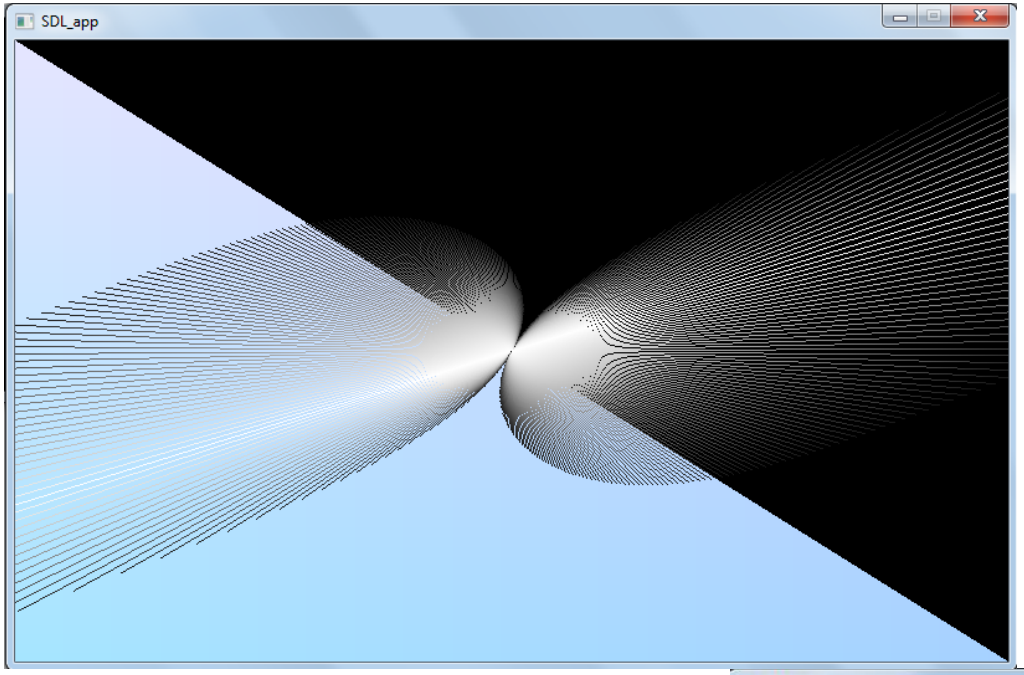


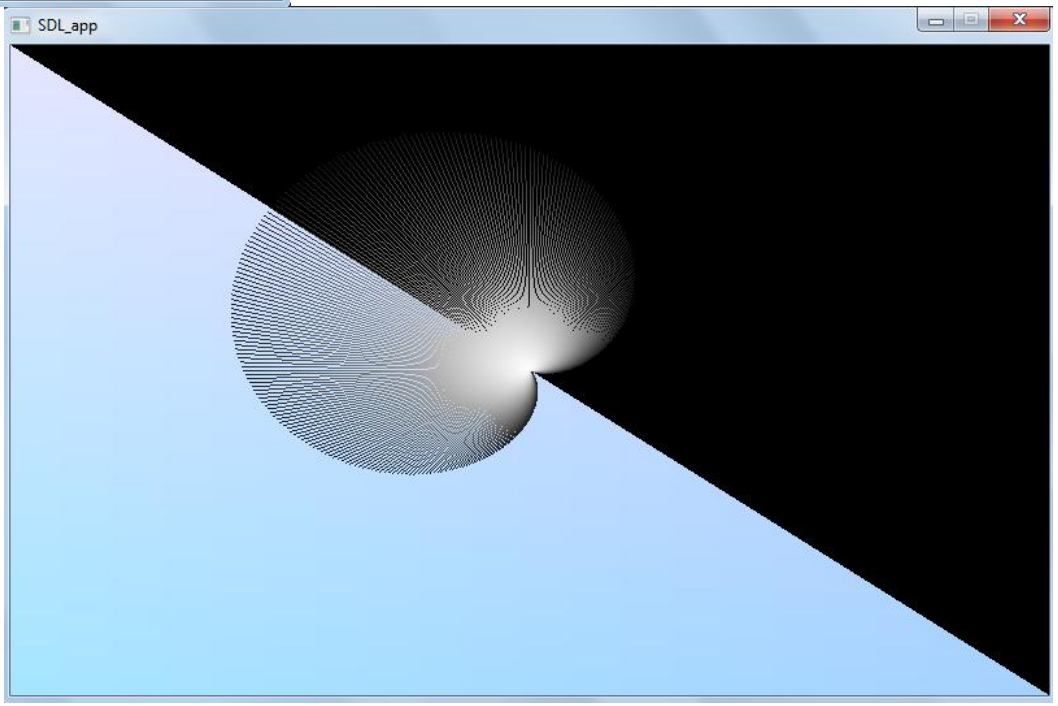
Mengatur Bunga Berputar

```
point2D_t bulan[360];

for(i=0;i<360;i++)
{
    //ingat 1 derajat=3.14/180.radian
    r=100*sin(2*i*(3.14/180));

     // boleh dicoba dgn fungsi trigonometri lainnya
     //r=100*(1+cos(i*(3.14/180)));
     //r=100*(1+tan(i*(3.14/180)));
    bulan[i].x=r*cos((i*(3.14/180))+tick);
    bulan[i].y=r*sin((i*(3.14/180))+tick);
}
centerPolygon(bulan,pusat,kuning,putih,360);
```


SDL_app


SDL_app

Mengatur Warna

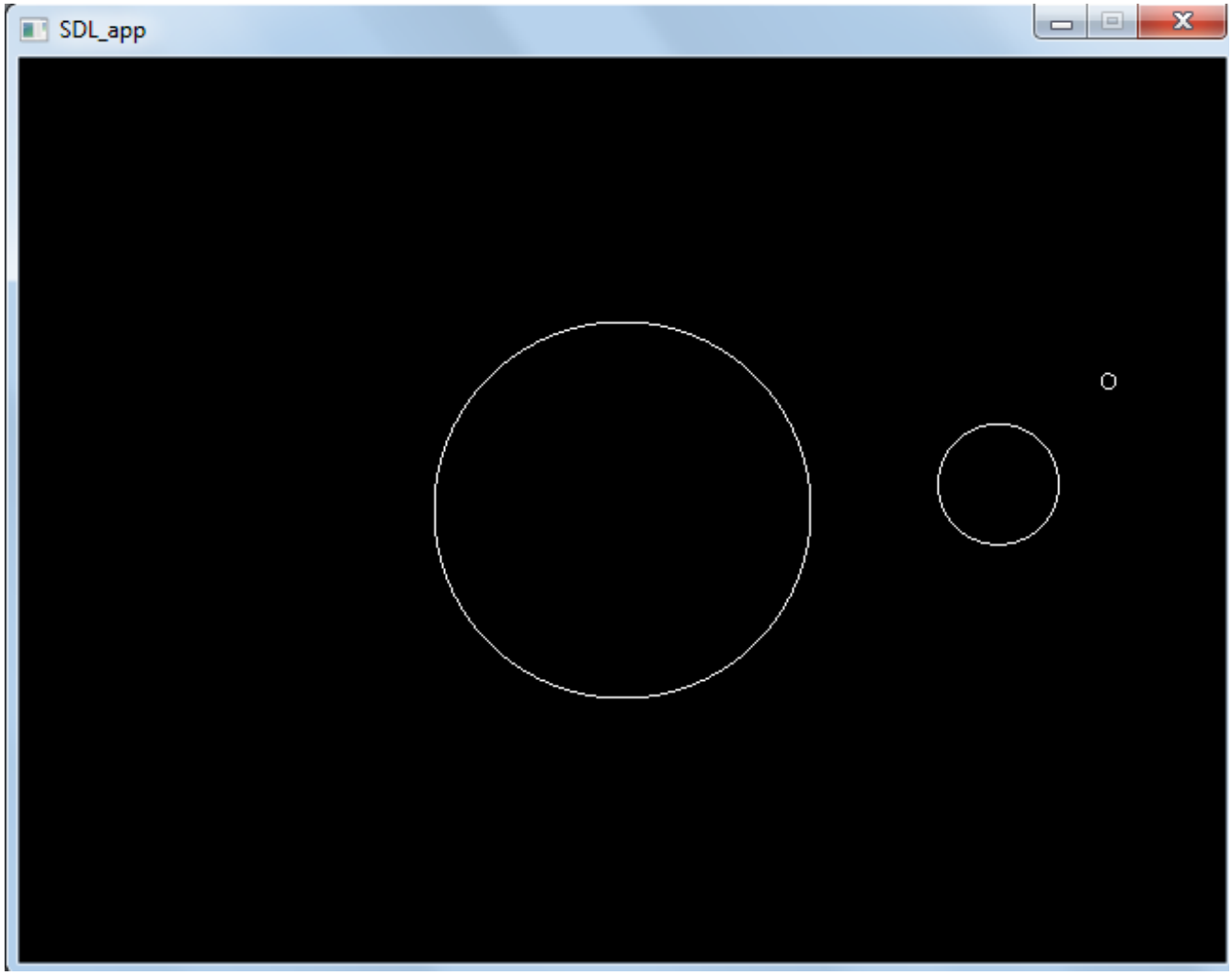
```
color_t biru[4]={{0.9,0.9,9.},{0.65,0.9,9.},{0.65,0.82,9.},{9.,9.,9.}};
color_t kuning={0.1,0.1,0.1};
color_t putih={1.,1.,1.};
color_t merah={1.,0.,8.};
```

Mengatur Kecepatan Berputar

```
tick-=0.001;
if(tick2>600)
    tick2=0;
else
    tick2+=0.001;
```

Benda Berputar / rotasi / revolusi

BULAN BUMI MATAHARI (BBM)


SDL_app

Membuat Bulan Bumi Matahari

```
point2D_t matahari[360],bumi[360],bulan[360];
vector2D_t vec;

// membuat matahari (tidak bergerak)
drawCircle(matahari,360,100);

//matrix bumi
matrix2D_t mat=rotationMTX(tick)*translationMTX(200.,0.)*scalingMTX(0.32,0.32);

//matrix bulan
matrix2D_t mat2=mat*rotationMTX(tick2)*translationMTX(250.,0.)*scalingMTX(0.12,0.12);
```

```
// memutar bumi
for(int i=0;i<360;i++)
{
    vec=Point2Vector(matahari[i]);
    vec=mat*vec;
    bumi[i]=Vector2Point(vec);
}
drawPolygon(bumi,360);

// memutar bulan
for(int i=0;i<360;i++)
{
    vec=Point2Vector(matahari[i]);
    vec=mat2*vec;
    bulan[i]=Vector2Point(vec);
}
drawPolygon(bulan,360);
```

Pergerakan/perputaran patah-patah

```
// pada userdraw() ditambahkan :
Uint32 current_tick = SDL_GetTicks();
float tick=0.0003*current_tick/16;
float tick2=0.003*current_tick/16;

// pada main() ditambahkan :
SDL_Delay(250);
```

Pergerakan/perputaran lembut

```
// pada main() :
static float tick=0,tick2=0;


tick+=0.0001;
tick2+=0.0001;
```