OpenGL Skeletal Animation With ASSIMP Tutorial part 3 — Skeleton & Animation classes
(part 3.2 - Animation class)

The last step - **Animation class**. You have already heard about this one in the previous tutorial. In the animation class we keep very important and useful data that is used in the skeleton class to drive the animation properly. However, this data is a little bit random, we only come up with it after analyzing the outputs the series of experiments on our animation gave.

Anyway, here is the **Animation class** code:

```
class Animation
{
   public:
      string name; //the name of the animation

      float startTime; //start time of the animation
      float endTime; //end time of the animation
      float speed; //speed of the animation
      int priority; //priority of the animation
      bool loop; //is this animation looped

      Animation();
      Animation(string name, vec2 times, float speed = 0.25, int priority = 10, bool loop = false);

      void setName(string name);
      void setTime(vec2 frames);
      void setSpeed(float speed);
      void setPriority(int priority);
      void setLoop(bool loop);

      ~Animation();
};
```

Animation:

-name (the name of the animation)

-startTime, endTime (starting time and ending time of the animation, calculated in frames)

-speed (the speed of the animation: amount of animation frames per in-game frame)

-priority (the priority of the animation)

-loop (if animation is looped, it runs in cycles. Or after the animation's end it starts again)

-default constructor (default constructor defines default parameters for the in-class variables)

-custom constructor (in this one you define custom parameters for the in-class variables)

-setName() (sets the name of the animation)

-setTime() (sets the starting and ending frames of the animation)

-setSpeed() (sets the speed of the animation. The speed is a custom amount of animation frames per in-game frame. It can also be float)

-setProirity() (sets the priority of the animation)

-setLoop() (defines whether the animation is looped or not)

And the realization:

```
Animation::Animation()
{
   name = "unknown";

   startTime = 0;
   endTime = 0;
   speed = 0.25; //default is 0.25 ~ 24 frames per second
   priority = 10; //default priority is 10
   loop = false;
}
```

Default construct above defines default values for the in-class variables.

```
Animation::Animation(string name, vec2 times, float speed, int priority, bool loop)
{
   this->name = name;

   startTime = times.x; //starting frame
   endTime = times.y; //ending frame

   this->speed = speed;

   this->priority = priority;
```

```
    this->loop = loop;
}
```

In the custom constructor you are the one who defines the values for the in-class variables.

```
void Animation::setName(string name)
{
    this->name = name;
}
```

This function sets the name for the animation.

```
void Animation::setTime(vec2 frames)
{
    startTime = frames.x;
    endTime = frames.y;
}
```

This one sets animation starting and ending frames.

```
void Animation::setSpeed(float speed)
{
    this->speed = speed;
}
```

setSpeed() function sets the desirable speed of the animation.

```
void Animation::setPriority(int priority)
{
    this->priority = priority;
}
```

Sets priority of the animation.

```
void Animation::setLoop(bool loop)
{
    this->loop = loop;
}
```

And this one defines the loop variable.

```
Animation::~Animation(){}
```