```cpp
#include "MenuTexture.h"
#include "Window.h"

MenuTexture::MenuTexture(std::string text, std::string fontpath, int fontsize, SDL_Color color) {
    texture = NULL;
    this->text = text;
    this->fontpath = fontpath;
    this->color = color;
    this->appearance = {0,0,0,0};
    this->fontsize = fontsize;
};

SDL_Texture* MenuTexture::loadTextTexture() {
    SDL_Texture* text_tx = NULL;

    //Render text surface
    SDL_Surface* text_surface = TTF_RenderText_Solid(font, text.c_str(), color);
    if (text_surface != NULL)
    {
        //Create texture from surface pixels
        text_tx = SDL_CreateTextureFromSurface(Window::getInstance()->getRenderer(), text_surface);
        if (text_tx == NULL)
        {
            printf("Failed to create texture from rendered text. SDL Error: %s\n", SDL_GetError());
        }
        //Get Correct Size
        appearance.w = text_surface->w;
        appearance.h = text_surface->h;

        //Get rid of old surface
        SDL_FreeSurface(text_surface);
        text_surface = NULL;
    }
    else
    {
        printf("Failed to render text surface. SDL_ttf Error: %s\n", TTF_GetError());
    }

    return text_tx;
};

bool MenuTexture::loadMedia() {
    bool success = true;

    //Open the font
    if (setFont(fontpath.c_str()) == true)
    {
        //Color is already set
```

```
49          //Render text
50          texture = loadTextTexture();
51          if (texture == NULL)
52          {
53              printf("Failed to render texture for text.\n");
54              success = false;
55          }
56      }
57      else
58      {
59          success = false;
60      }
61
62      return success;
63  };
64
65  void MenuTexture::render() {
66      //Set Renderer
67      SDL_Renderer* renderer = Window::getInstance()->getRenderer();
68
69      //Render
70      SDL_RenderCopy(renderer, texture, NULL, &appearance);
71  };
72
73  void MenuTexture::tick() {};
74
75  void MenuTexture::setColor(Uint8 r, Uint8 g, Uint8 b, Uint8 a) {
76      //Set Color
77      color.r = r;
78      color.g = g;
79      color.b = b;
80      color.a = a;
81  };
82
83  bool MenuTexture::setFont(std::string path) {
84      bool success = true;
85
86      //Free Font
87      if (font != NULL) {
88          TTF_CloseFont(font);
89          font = NULL;
90      }
91
92      //Open the font
93      font = TTF_OpenFont(path.c_str(), fontsize);
94      if (font == NULL)
95      {
96          printf("Failed to load font. SDL_ttf Error: %s\n", TTF_GetError
              ());
97          success = false;
98      }
99
100     return success;
```

```
101 };
102
103 void MenuTexture::setX(int x) {
104     appearance.x = x;
105 };
106
107 void MenuTexture::setY(int y) {
108     appearance.y = y;
109 };
110
111 int MenuTexture::getX() {
112     return appearance.x;
113 };
114
115 int MenuTexture::getY() {
116     return appearance.y;
117 };
118
119 int MenuTexture::getW() {
120     return appearance.w;
121 }
122
123 int MenuTexture::getH() {
124     return appearance.h;
125 };
126
127 std::string MenuTexture::getType() {
128     return "TEXTURE";
129 };
130
131 void MenuTexture::free() {
132     //Free texture
133     SDL_DestroyTexture(texture);
134     texture = NULL;
135
136     //Free font
137     TTF_CloseFont(font);
138     font = NULL;
139 };
140
141 MenuTexture::~MenuTexture() {
142     //free
143     free();
144 };
```