Programação II

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Classe Xbox360

- Diagrama UML

Xbox360
- onoff : bool
- kinect_onoff : bool
- availableStorage : double
- usuarios : vector<string,5>
- version : double
- coord_xyz : vector<int,3>
+ power_on_off() : void
+ kinect_on_off() : void
+ cadastrar_usuario() : void
+ exibe_info() : void
+ listar_usuarios() : void
+ instalar_jogo() : void
+ desinstalar_jogo() : void
+ <<constructor>> Xbox360() : void
+ <<constructor>> Xbox360(Xbox : Xbox360) : void
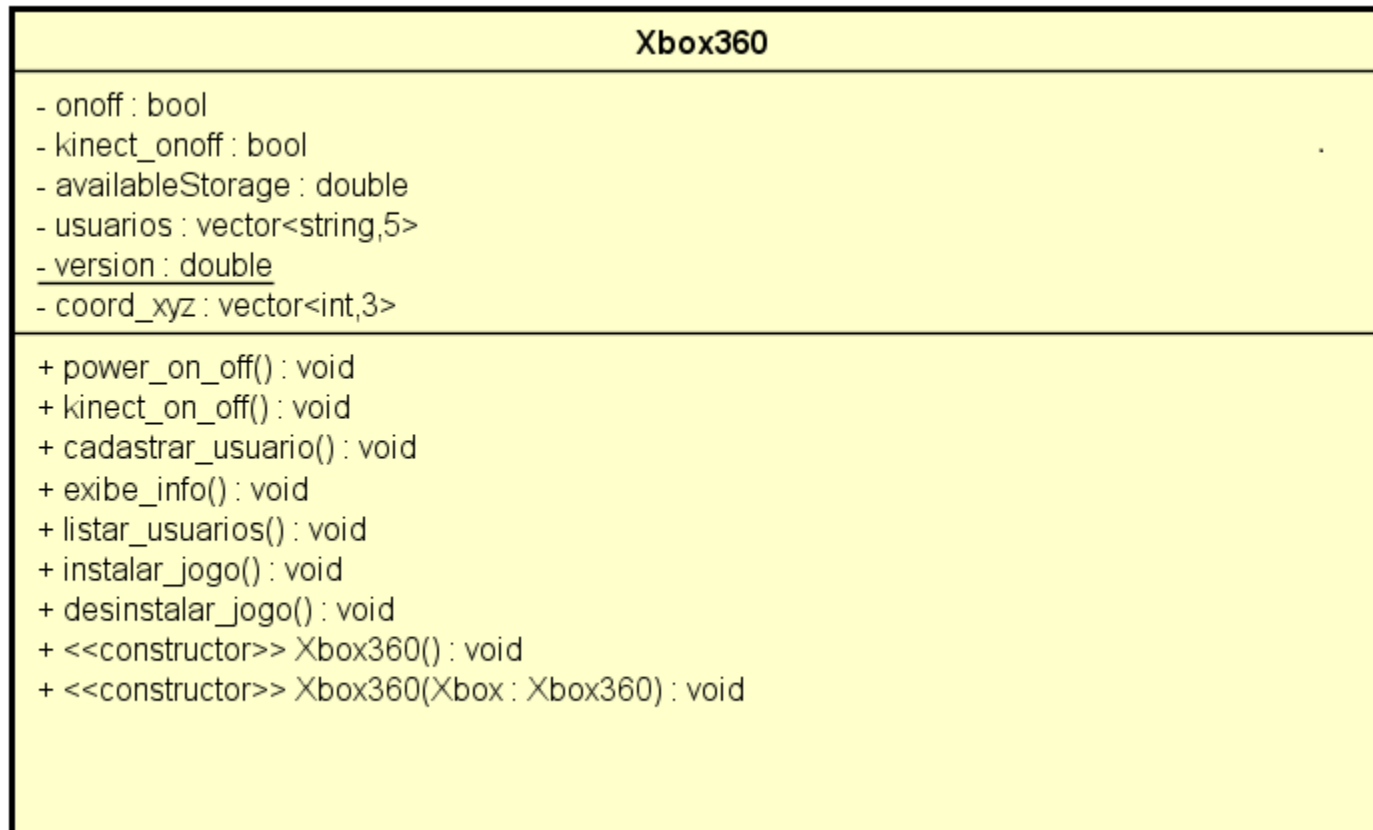
Classe Xbox360

▶ Header

```cpp
1   #include <string>
2   using std::string;
3
4   #ifndef XBOX360_H
5   #define XBOX360_H
6
7   class Xbox360
8   {
9   public:
10      Xbox360();
11      ~Xbox360();
12      void power_on_off();
13      void kinect_on_off();
14      void instalar_jogo();
15      void desinstalar_jogo();
16      void exibe_info();
17      void cadastrar_usuario( string, int );
18      void listar_usuarios ( ) const;
19  private:
20      double version;
21      double availableStorage;
22      int coord_xyz[3];
23      bool onoff;
24      bool kinect_onoff;
25      string usuarios[5];
26  };
27
28  #endif // XBOX360_H
```

Classe Xbox360

- .Cpp

```cpp
#include "Xbox360.h"
#include <iostream>

using std::cout;

Xbox360::Xbox360()
{
    onoff = false;
    kinect_onoff = false;
    availableStorage = 120.00;
    version = 1.0;
    coord_xyz[3] = { 0,0,0 };
        for(int i = 0; i < 5; i++)
            usuarios[i] = "---";

}

Xbox360::~Xbox360()
{
```

Classe Xbox360

- .Cpp

```cpp
23   void Xbox360::power_on_off( )
24   {
25       if ( !onoff )
26       {
27           power_on_off = true;
28           cout << "*Console liga*\n";
29       }
30       else
31           cout << "*Console reseta*\n";
32   }
33
34   void Xbox360::kinect_on_off( )
35   {
36       if( kinect_onoff )
37           cout << "*Kinect liga*\n";
38       else
39           cout << "*Kinect desliga*.\n";
40   }
41
```

Classe Xbox360

▶ .Cpp

```cpp
41
42  void Xbox360::instalar_jogo()
43  {
44      if( availableStorage > 10.00 )
45      {
46          availableStorage -= 10.00;
47          cout << "O jogo foi instalado com sucesso.\n"
48               << "Espaco livre: " << availableStorage << " GB \n";
49
50      }
51      else
52          cout << "Nao ha espaco suficiente.\n";
53  }
54
55  void Xbox360::desinstalar_jogo()
56  {
57      if( availableStorage < 120.00)
58      {
59          availableStorage += 10;
60          cout << "O jogo foi desinstalado com sucesso.\n"
61               << "Espaco livre " << availableStorage << " GB \n";
62      }
63      else
64          cout << "Nao ha jogos a serem desinstalados.\n";
65  }
```

Classe Xbox360

- .Cpp

```cpp
67  void Xbox360::exibe_info()
68  {
69      cout << "Informacoes de Sistema:\n";
70      cout << "Xbox360 versao "<< versao <<".\n";
71      cout << "Espaco livre: "<< availableStorage <<" GB.\n";
72      if (kinect_onoff)
73          cout << "Kinect ligado.\n";
74      else
75          cout << "Kinect desligado\n";
76  }
77
78  void Xbox360::cadastrar_usuario( string newUser, int indice)
79  {
80      if (onoff)
81      {
82          if( indice >= 0 && indice < 5)
83              listaUsuarios[indice] = newUser;
84          else
85              cout << "Nao pode ser cadastrado.\n";
86      }
87
88  }
89
```

Classe Xbox360

- .Cpp

```
78   void Xbox360::cadastrar_usuario( string newUser, int indice)
79   {
80       if (onoff)
81       {
82           if( indice >= 0 && indice < 5)
83               listaUsuarios[indice] = newUser;
84           else
85               cout << "Nao pode ser cadastrado.\n";
86       }
87
88   }
89
90   void Xbox360::listar_usuarios( ) const
91   {
92       if( onoff )
93       {
94           cout << "Usuarios:\n";
95           for( int i = 0; i < 5; i++ )
96               cout << usuarios[i] << '\n';
97       }
98   }
```

Classe Xbox360

- Main

```cpp
1   #include <stdio.h>
2   #include <iostream>
3   using std::cout;
4
5   #include "Xbox360.h"
6
7   int main(int argc, char **argv)
8   {
9           Xbox360 Xbox;
10          Xbox.power_on_off();
11      //Cadastrando usuarios
12      Xbox.cadastrar_usuario("Robert", 0);
13      Xbox.cadastrar_usuario("Jessica", 1);
14      Xbox.cadastrar_usuario("Barbara", 2);
15      Xbox.cadastrar_usuario("Humbert", 3);
16      Xbox.cadastrar_usuario("Jane", 4);
17
18      Xbox.exibe_info();
19      Xbox.listar_usuarios();
20      return 0;
21  }
```