Deakin University

Object Oriented Development

OnTrack Submission

MyTime Class

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Outcome	**Weight**
Evaluate Code	♦♦♦♦◊
Principles	♦♦♦♦◊
Build Programs	♦♦♦♦◊
Design	♦♦♦♦◊
Justify	♦♦♦♦◊

Long task to do was happy to finish

May 3, 2021

```cs
using Sub_2._3C.Task_2._3C;
using System;

namespace Sub_2._3C
{
    class Program
    {
        static void Main(string[] args)
        {
            Mytime time = new Mytime(11, 22, 35);

            Console.WriteLine("Current Time is {0}", time);
            Console.WriteLine("\nNext Hour is {0}", time.NextHour());
            Console.WriteLine("Next Min is {0}", time.NextMinute());
            Console.WriteLine("Next Sec is {0}", time.NextSecond());

            Console.WriteLine("\nLast hour Was {0}", time.PreviousHour());
            Console.WriteLine("Last min was {0}", time.PreviousMinute());
            Console.WriteLine("Last Sec was {0}", time.PreviousSecond());

        }
    }
}
```

```cs
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Sub_2._3C
{
    namespace Task_2._3C
    {
        class Mytime
        {
            private int hour;
            private int minute;
            private int second;

            //These are the fields ^

            public Mytime()
            {
                hour = 0;
                minute = 0;
                second = 0;
            }

            public Mytime(int hour, int minute, int second)
            {
                if (hour < 0 || hour > 24)
                {
                    Console.WriteLine("Invalid hour");
                }

                if (minute < 0 || minute > 60)
                {
                    Console.WriteLine("Invalid Minute");
                }

                if (second < 0 || second > 60)
                {
                    Console.WriteLine("Invalid Second");
                }

                this.hour = hour;
                this.minute = minute;
                this.second = second;

            }


            public int getHour()
            {
                return this.hour;
            }
```

```
54              public int getMinute()
55              {
56                  return this.minute;
57              }
58
59              public int getSecond()
60              {
61                  return this.second;
62              }
63
64              //methods
65              public void SetTime(int hour, int minute, int second)
66              {
67                  if (hour < 0 || hour > 23)
68                  {
69                      Console.WriteLine("Invalid hour");
70                  }
71
72                  if (minute < 0 || minute > 59)
73                  {
74                      Console.WriteLine("Invalid Minute");
75                  }
76
77                  if (second < 0 || second > 59)
78                  {
79                      Console.WriteLine("Invalid Second");
80                  }
81
82                  this.hour = hour;
83                  this.minute = minute;
84                  this.second = second;
85              }
86
87              public void setHour(int hour)
88              {
89                  if (hour < 0 || hour > 23)
90                  {
91                      Console.WriteLine("Invalid hour");
92                  }
93                  this.hour = hour;
94              }
95
96              public void setMinute(int minute)
97              {
98                  if (minute < 0 || minute > 59)
99                  {
100                     Console.WriteLine("Invalid Minute");
101                 }
102                 this.minute = minute;
103             }
104
105
106             public void setSecond(int second)
```

```
107             {
108                 if (second < 0 || second > 59)
109                 {
110                     Console.WriteLine("Invalid Second");
111                 }
112                 this.second = second;
113             }
114
115
116
117             public override string ToString()
118             {
119                 return string.Format("{0:D2}:{1:D2}", this.hour, this.minute,
                    ↪  this.second);
120             }
121
122             public int NextHour()
123             {
124                 this.hour += 1;
125                 if (this.hour > 23)
126                 {
127                     this.hour = 0;
128                 }
129                 return this.hour += 1;
130             }
131
132
133
134             public int NextMinute()
135             {
136
137                 if (this.minute > 59)
138                 {
139                     return this.minute = 0;
140                     NextHour();
141                 }
142                 else
143                 {
144                     return this.minute += 1;
145                 }
146
147
148             }
149
150             public int NextSecond()
151             {
152
153                 if (this.second >= 59)
154                 {
155                     return this.second = 0;
156
157                 }
158                 else
```

```
159                 {
160                     return this.second += 1;
161                 }
162 
163             }
164 
165             public int PreviousHour()
166             {
167 
168                 if (this.hour < 0)
169                 {
170 
171                     return this.hour = 23;
172                 }
173 
174                 return this.hour -= 1;
175 
176             }
177 
178             public int PreviousMinute()
179             {
180 
181                 if (this.minute < 0)
182                 {
183                     return this.minute = 59;
184                     PreviousHour();
185                 }
186 
187                 return this.minute -= 1;
188 
189             }
190 
191             public int PreviousSecond()
192             {
193 
194                 if (this.second < 0)
195                 {
196                     return this.second = 59;
197                     PreviousMinute();
198                 }
199                 return this.second -= 1;
200 
201             }
202         }
203     }
204 }
```