

Correction TP2
Qt designer, PyQt5 et Python

Nombre parfait :

pgr0.py

```
def parfait(n):
    s=0
    for i in range(1,n,1):
        if(n%2==0):
            s=s+i
            if(s==n):
                ok=True
        else:
            ok=False
    return ok
```

pgr1.py

```
from PyQt5.QtWidgets import QApplication
from PyQt5.uic import loadUi
```

```
app = QApplication([])
window = loadUi("forme2.ui")
```

```
def parfait(n):
    s=0
    for i in range(1,n+1):
        if(n%2==0):
            s=s+i
            if(s==n):
                ok=True
        else:
            ok=False
    return ok
```

```
def verif(n):
    n=int(n)
    if (n<=0):
        msg='verifier le nombre donné'
    else:
        test=parfait(n)
        if(test==False):
            msg=str(n)+' est un nombre parfait'
        else:
            msg=str(n)+' n est pas un nombre parfait'
```

```
return msg
```

```
def play():  
    nb = window.tx.text()  
    res = verif(nb)  
    window.lb3.setText(res)
```

```
window.ok.clicked.connect(play)  
window.show()  
app.exec()
```

forme2.ui

```
<?xml version="1.0" encoding="UTF-8"?>  
<ui version="4.0">  
    <class>MainWindow</class>  
    <widget class="QMainWindow" name="MainWindow">  
        <property name="geometry">  
            <rect>  
                <x>0</x>  
                <y>0</y>  
                <width>500</width>  
                <height>400</height>  
            </rect>  
        </property>  
        <property name="minimumSize">  
            <size>  
                <width>500</width>  
                <height>400</height>  
            </size>  
        </property>  
        <property name="maximumSize">  
            <size>  
                <width>500</width>  
                <height>400</height>  
            </size>  
        </property>  
        <property name="windowTitle">  
            <string>MainWindow</string>  
        </property>  
        <widget class="QWidget" name="centralwidget">  
            <widget class="QLabel" name="lb1">  
                <property name="geometry">  
                    <rect>  
                        <x>130</x>  
                        <y>20</y>
```

```
<width>181</width>
<height>20</height>
</rect>
</property>
<property name="text">
<string>&lt;html&gt;&lt;head/&gt;&lt;body&gt;&lt;p
align="center"&gt;&lt;span style="font-
size:16pt;"&gt;Nombre
parfait&lt;/span&gt;&lt;/p&gt;&lt;/body&gt;&lt;/html&gt;</string>
</property>
</widget>
<widget class="QLabel" name="lb2">
<property name="geometry">
<rect>
<x>30</x>
<y>80</y>
<width>161</width>
<height>16</height>
</rect>
</property>
<property name="text">
<string>&lt;html&gt;&lt;head/&gt;&lt;body&gt;&lt;p&gt;&lt;span style="font-
size:12pt;"&gt;Saisir votre
nombre&lt;/span&gt;&lt;/p&gt;&lt;/body&gt;&lt;/html&gt;</string>
</property>
</widget>
<widget class="QLabel" name="lb3">
<property name="geometry">
<rect>
<x>130</x>
<y>160</y>
<width>211</width>
<height>20</height>
</rect>
</property>
<property name="text">
<string>&lt;html&gt;&lt;head/&gt;&lt;body&gt;&lt;p
align="center"&gt;&lt;--&lt;/p&gt;&lt;/body&gt;&lt;/html&gt;</string>
</property>
</widget>
<widget class="QPushButton" name="ok">
<property name="geometry">
<rect>
<x>180</x>
<y>220</y>
<width>90</width>
<height>28</height>
</rect>
</property>
<property name="text">
```

```
<string>Valider</string>
</property>
</widget>
<widget class="QLineEdit" name="tx">
<property name="geometry">
<rect>
<x>230</x>
<y>70</y>
<width>181</width>
<height>28</height>
</rect>
</property>
</widget>
</widget>
<widget class="QMenuBar" name="menubar">
<property name="geometry">
<rect>
<x>0</x>
<y>0</y>
<width>500</width>
<height>22</height>
</rect>
</property>
</widget>
<widget class="QStatusBar" name="statusbar"/>
</widget>
<resources/>
<connections/>
</ui>
```