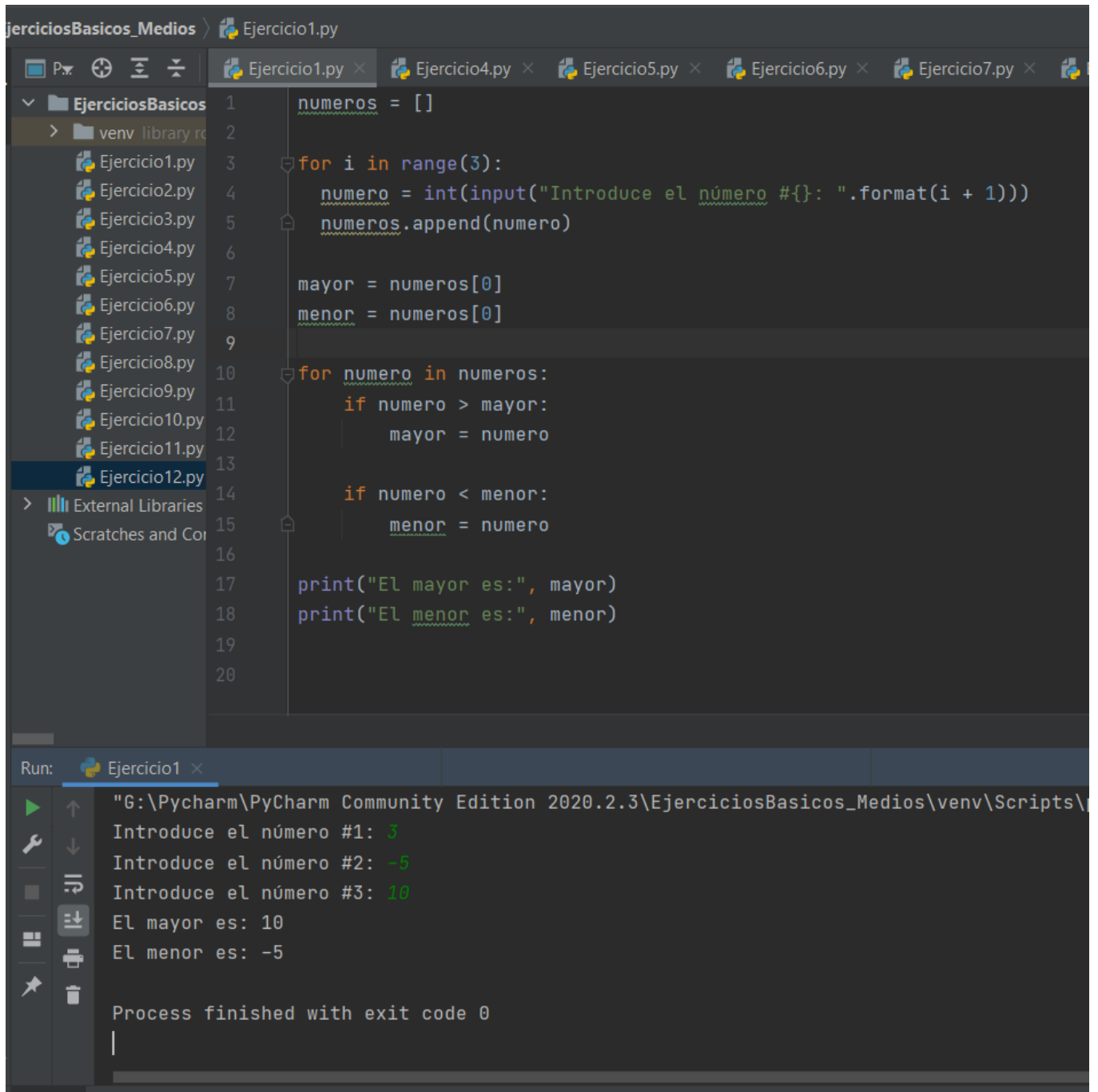


Práctica 2 Python Ejercicios Básicos/Medios

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Fecha: 05/12/2020

Ejercicio 1:

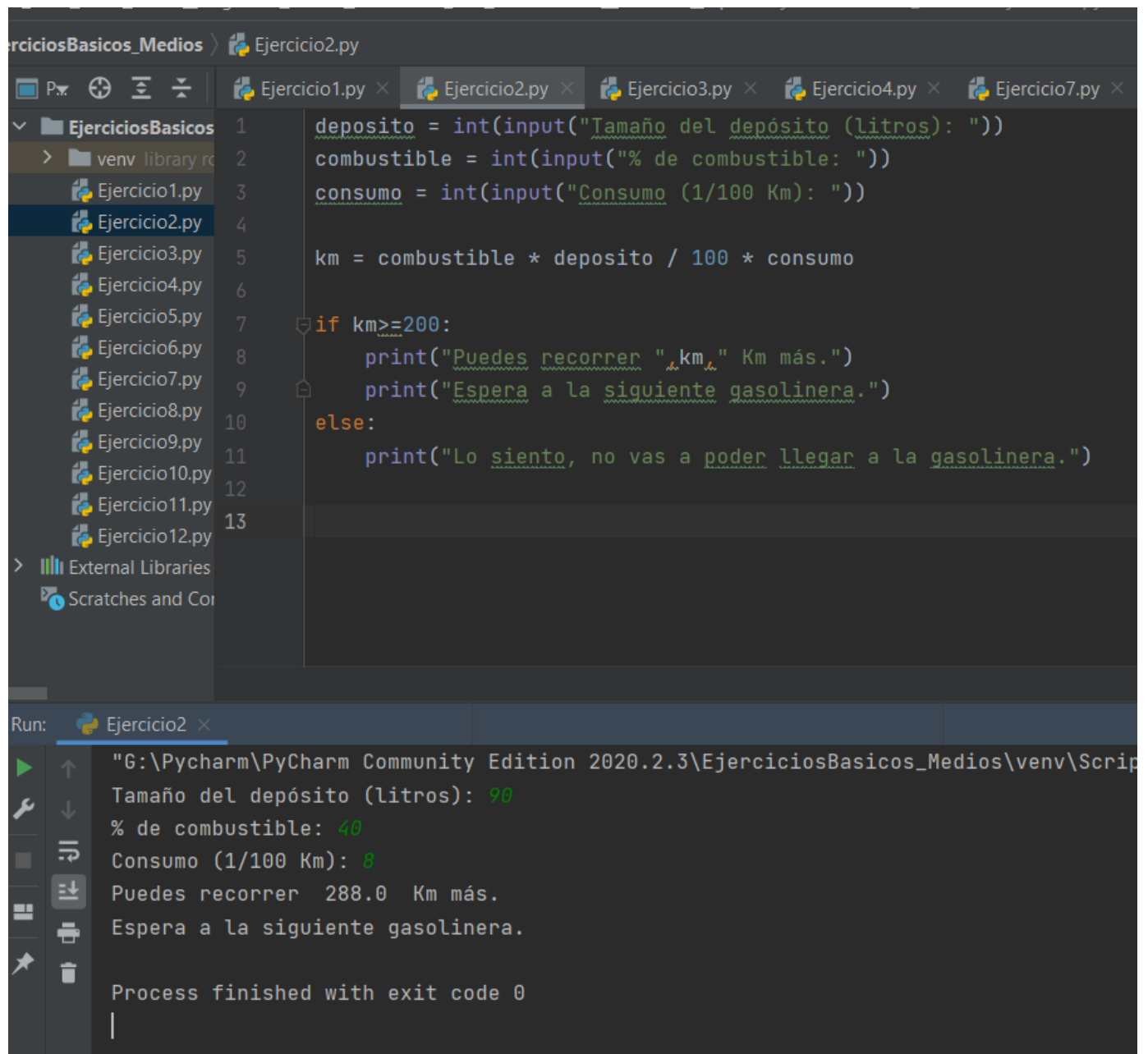


The screenshot displays the PyCharm IDE interface. The left sidebar shows a project named 'EjerciciosBasicos_Medios' with a file explorer containing various Python files from 'Ejercicio1.py' to 'Ejercicio12.py'. The main editor window is open to 'Ejercicio1.py', showing the following Python code:

```
1  numeros = []
2
3  for i in range(3):
4      numero = int(input("Introduce el número #{}: ".format(i + 1)))
5      numeros.append(numero)
6
7  mayor = numeros[0]
8  menor = numeros[0]
9
10 for numero in numeros:
11     if numero > mayor:
12         mayor = numero
13
14     if numero < menor:
15         menor = numero
16
17 print("El mayor es:", mayor)
18 print("El menor es:", menor)
19
20
```

Below the editor, the 'Run' console shows the execution of the program. It prompts the user to enter three numbers: 3, -5, and 10. The program then outputs 'El mayor es: 10' and 'El menor es: -5', followed by the message 'Process finished with exit code 0'.

Ejercicio2:

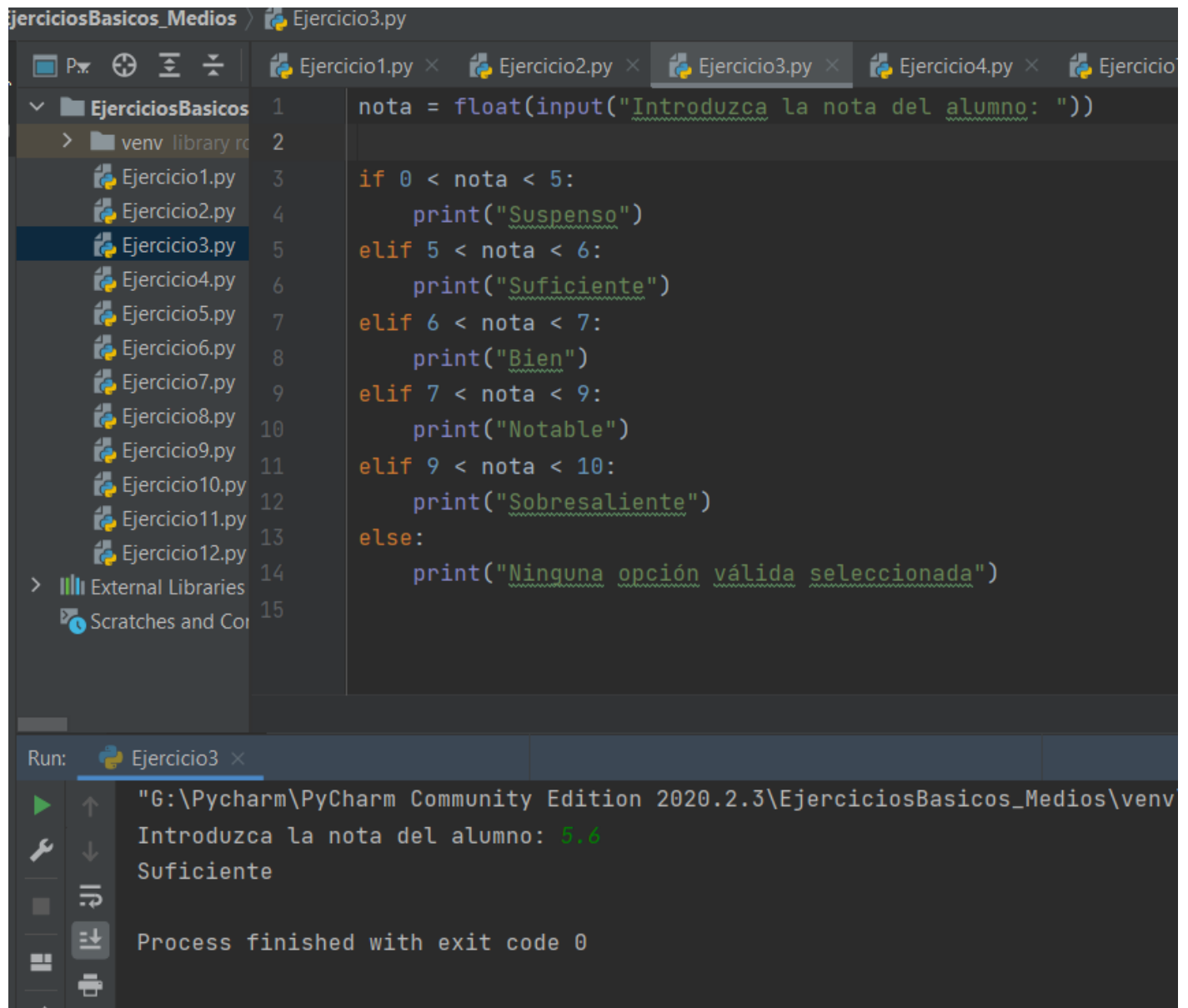


```
1  deposito = int(input("Tamaño del depósito (litros): "))
2  combustible = int(input("% de combustible: "))
3  consumo = int(input("Consumo (1/100 Km): "))
4
5  km = combustible * deposito / 100 * consumo
6
7  if km >= 200:
8      print("Puedes recorrer ", km, " Km más.")
9      print("Espera a la siguiente gasolinera.")
10 else:
11     print("Lo siento, no vas a poder llegar a la gasolinera.")
12
13
```

Run: Ejercicio2

"G:\Pycharm\PyCharm Community Edition 2020.2.3\EjerciciosBasicos_Medios\venv\Scripts"
Tamaño del depósito (litros): 90
% de combustible: 40
Consumo (1/100 Km): 8
Puedes recorrer 288.0 Km más.
Espera a la siguiente gasolinera.
Process finished with exit code 0

Ejercicio 3:

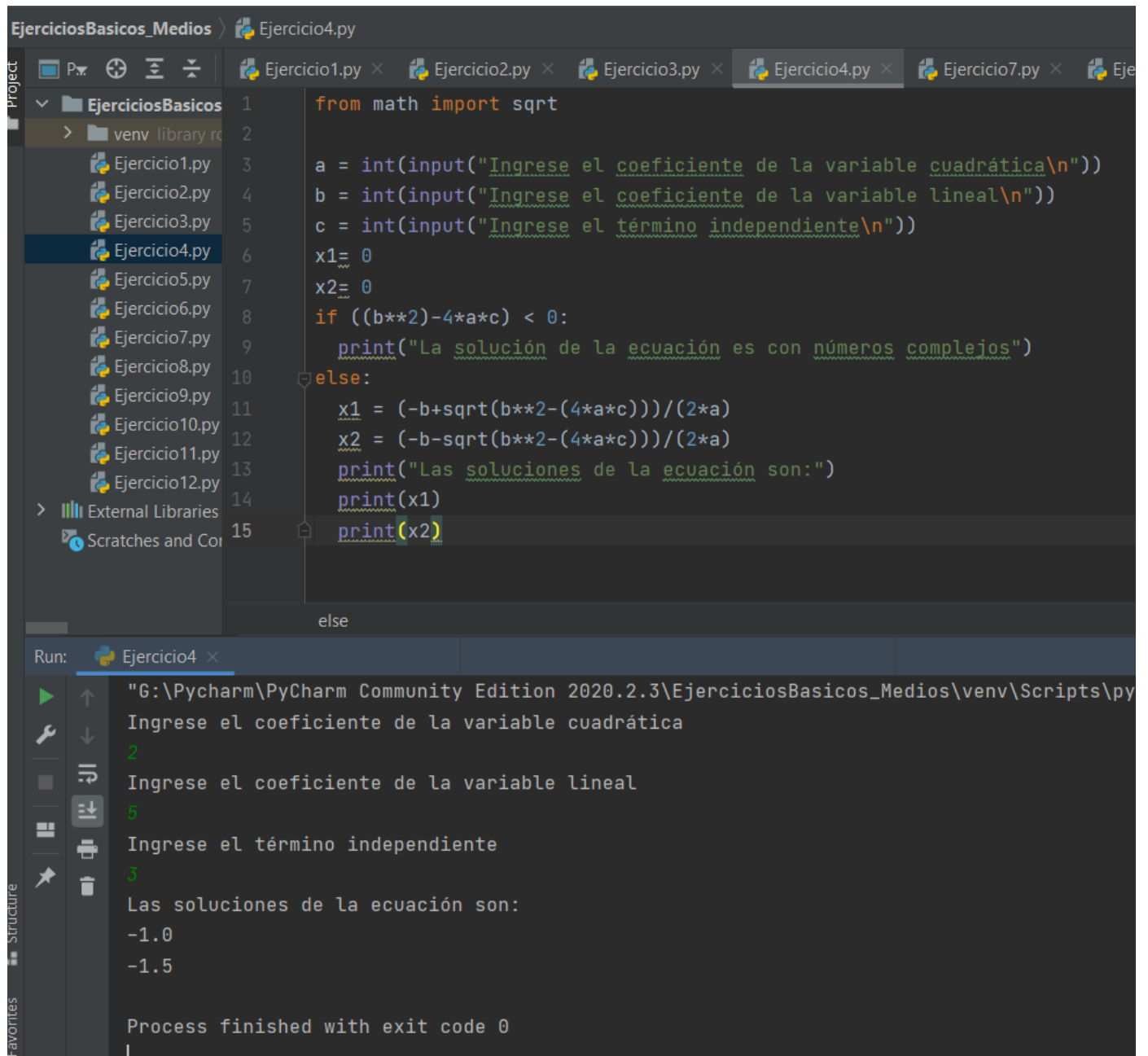


```
1  nota = float(input("Introduzca la nota del alumno: "))
2
3  if 0 < nota < 5:
4      print("Suspenso")
5  elif 5 < nota < 6:
6      print("Suficiente")
7  elif 6 < nota < 7:
8      print("Bien")
9  elif 7 < nota < 9:
10     print("Notable")
11  elif 9 < nota < 10:
12     print("Sobresaliente")
13  else:
14     print("Ninguna opción válida seleccionada")
15
```

Run: Ejercicio3

"G:\Pycharm\PyCharm Community Edition 2020.2.3\EjerciciosBasicos_Medios\venv
Introduzca la nota del alumno: 5.6
Suficiente
Process finished with exit code 0

Ejercicio 4:



The screenshot displays the PyCharm IDE interface. The top toolbar includes icons for running, debugging, and other development actions. The left sidebar shows the project structure with a folder named 'EjerciciosBasicos_Medios' containing several Python files. 'Ejercicio4.py' is selected and open in the main editor. The code in the editor is as follows:

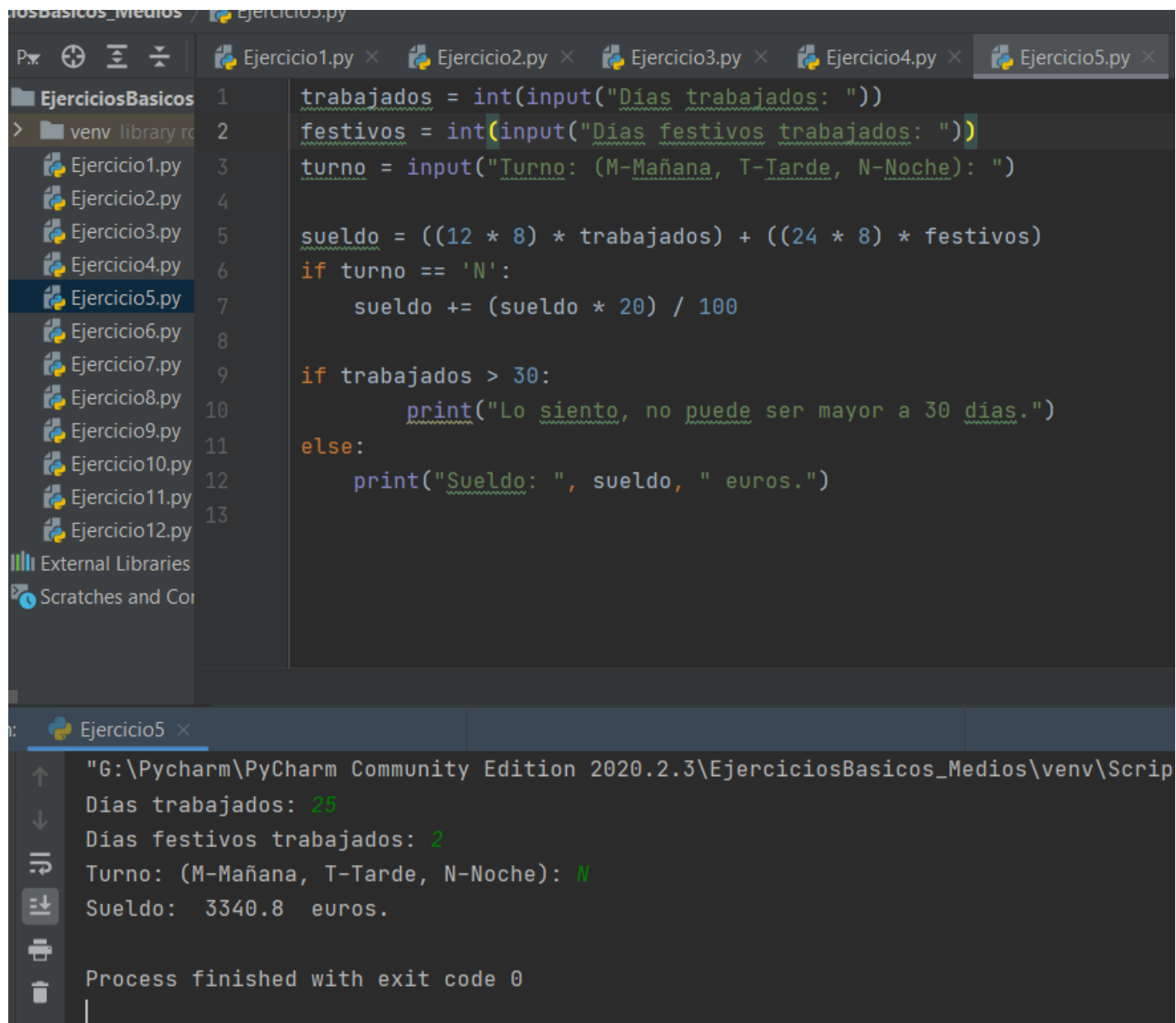
```
1 from math import sqrt
2
3 a = int(input("Ingrese el coeficiente de la variable cuadrática\n"))
4 b = int(input("Ingrese el coeficiente de la variable lineal\n"))
5 c = int(input("Ingrese el término independiente\n"))
6 x1= 0
7 x2= 0
8 if ((b**2)-4*a*c) < 0:
9     print("La solución de la ecuación es con números complejos")
10 else:
11     x1 = (-b+sqrt(b**2-(4*a*c)))/(2*a)
12     x2 = (-b-sqrt(b**2-(4*a*c)))/(2*a)
13     print("Las soluciones de la ecuación son:")
14     print(x1)
15     print(x2)
```

Below the editor, the 'Run' console shows the execution of 'Ejercicio4'. It displays the prompts for input, the user's inputs (2, 5, 3), the resulting solutions (-1.0 and -1.5), and a final message indicating the process finished successfully.

```
Run: Ejercicio4 x
"G:\Pycharm\PyCharm Community Edition 2020.2.3\EjerciciosBasicos_Medios\venv\Scripts\py
Ingrese el coeficiente de la variable cuadrática
2
Ingrese el coeficiente de la variable lineal
5
Ingrese el término independiente
3
Las soluciones de la ecuación son:
-1.0
-1.5

Process finished with exit code 0
```

Ejercicio 5:



The screenshot displays the PyCharm IDE interface. The top toolbar includes icons for file operations. The window title bar shows the project name 'EjerciciosBasicos_Medios' and the active file 'Ejercicio5.py'. The left sidebar shows a project tree with a folder 'venv library' and a list of files from 'Ejercicio1.py' to 'Ejercicio12.py'. The main editor area shows the Python code for 'Ejercicio5.py' with line numbers 1 through 13. The code calculates a salary based on days worked and holidays, and applies a bonus if the salary is below 3000. The bottom console shows the execution output for the same file, with input values 25, 2, and N, resulting in a salary of 3340.8 euros.

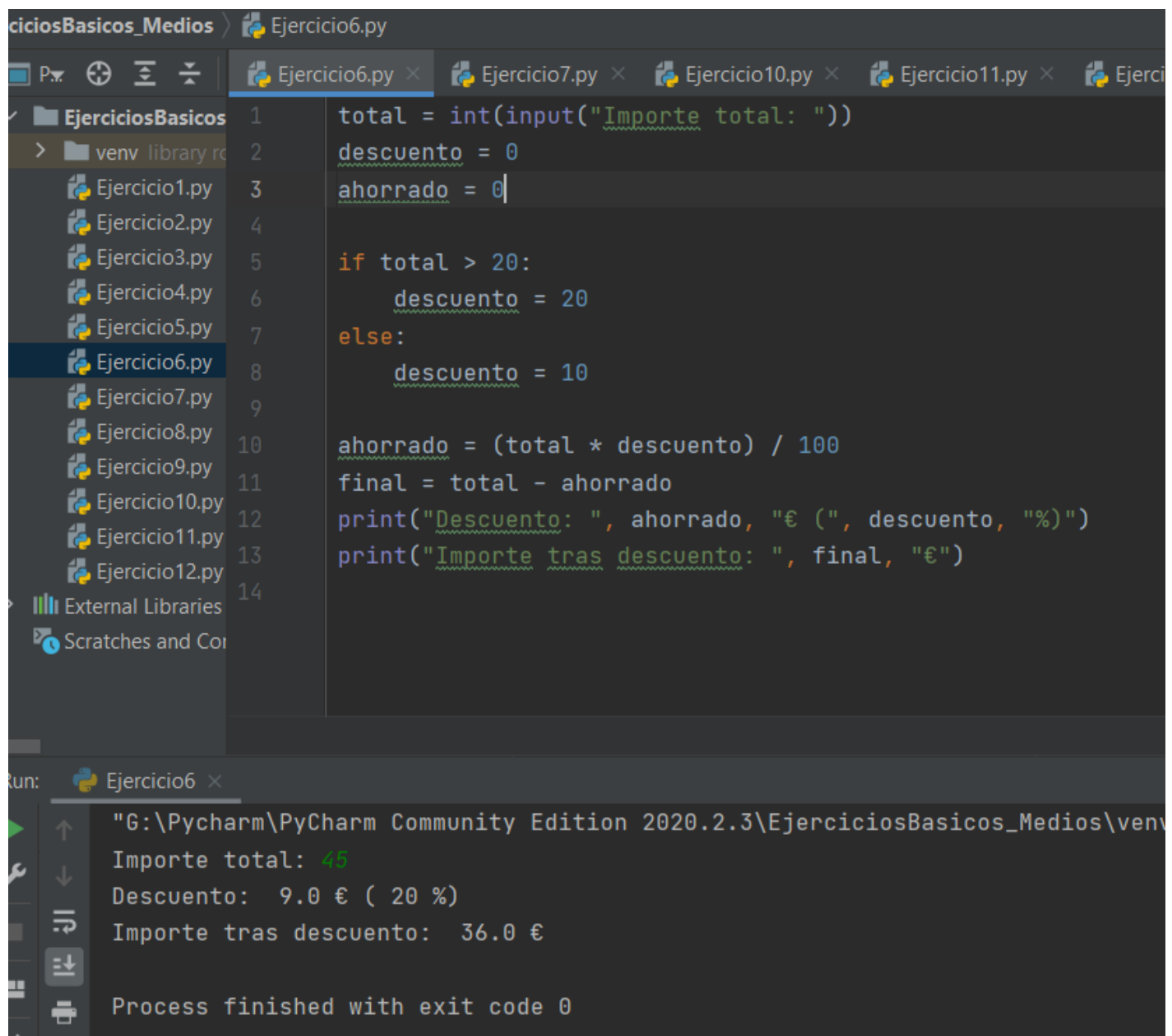
```
1  trabajados = int(input("Días trabajados: "))
2  festivos = int(input("Días festivos trabajados: "))
3  turno = input("Turno: (M-Mañana, T-Tarde, N-Noche): ")
4
5  sueldo = ((12 * 8) * trabajados) + ((24 * 8) * festivos)
6  if turno == 'N':
7      sueldo += (sueldo * 20) / 100
8
9  if trabajados > 30:
10     print("Lo siento, no puede ser mayor a 30 días.")
11 else:
12     print("Sueldo: ", sueldo, " euros.")
13
```

Output:

```
"G:\Pycharm\PyCharm Community Edition 2020.2.3\EjerciciosBasicos_Medios\venv\Scripts\python.exe" G:\Pycharm\PyCharm Community Edition 2020.2.3\EjerciciosBasicos_Medios\venv\Scripts\python.exe G:\Pycharm\PyCharm Community Edition 2020.2.3\EjerciciosBasicos_Medios\venv\Scripts\python.exe
Días trabajados: 25
Días festivos trabajados: 2
Turno: (M-Mañana, T-Tarde, N-Noche): N
Sueldo: 3340.8 euros.

Process finished with exit code 0
```

Ejercicio 6:



The screenshot displays the PyCharm IDE interface. The left sidebar shows a project named 'EjerciciosBasicos_Medios' with a file explorer containing various Python files, including 'Ejercicio6.py' which is currently selected. The main editor window shows the code for 'Ejercicio6.py' with line numbers 1 through 14. The code implements a discount calculation based on the total amount entered by the user. Below the editor, the 'Run' console shows the execution output for 'Ejercicio6', indicating that the program ran successfully with an exit code of 0.

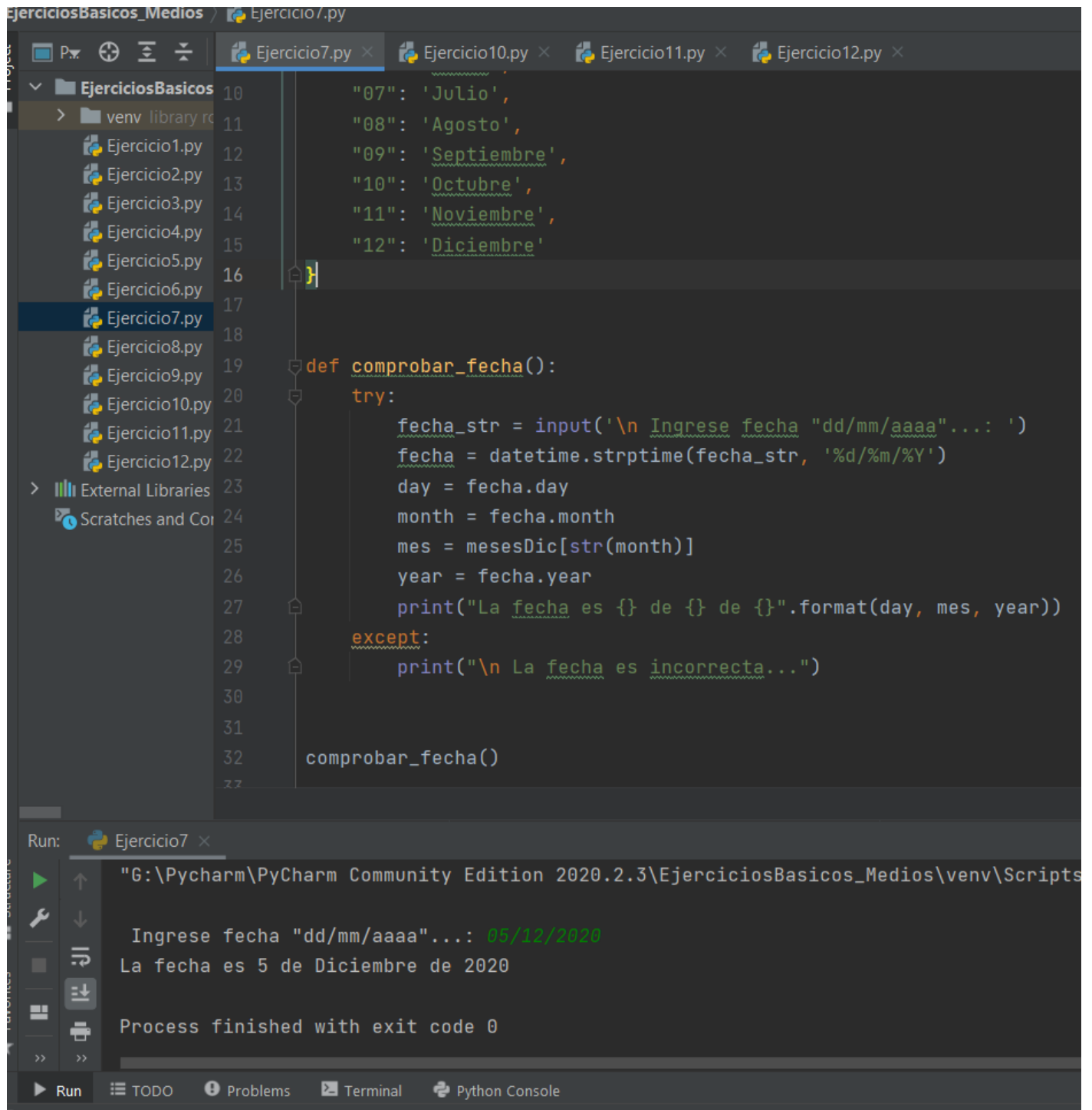
```
1 total = int(input("Importe total: "))
2 descuento = 0
3 ahorrado = 0
4
5 if total > 20:
6     descuento = 20
7 else:
8     descuento = 10
9
10 ahorrado = (total * descuento) / 100
11 final = total - ahorrado
12 print("Descuento: ", ahorrado, "€ (", descuento, "%)")
13 print("Importe tras descuento: ", final, "€")
14
```

Run: Ejercicio6 ×

```
"G:\Pycharm\PyCharm Community Edition 2020.2.3\EjerciciosBasicos_Medios\venv
Importe total: 45
Descuento:  9.0 € ( 20 %)
Importe tras descuento:  36.0 €

Process finished with exit code 0
```

Ejercicio 7:



The screenshot displays the PyCharm IDE interface. The left sidebar shows a project named 'EjerciciosBasicos_Medios' with a folder 'venv' and a list of Python files from 'Ejercicio1.py' to 'Ejercicio12.py'. 'Ejercicio7.py' is selected and open in the main editor. The code in the editor defines a dictionary 'mesesDic' mapping month numbers to names, a function 'comprobar_fecha()' that takes a date string and prints its components, and a call to this function at the bottom. The 'Run' tab at the bottom shows the execution output, indicating that the date '05/12/2020' was entered and correctly parsed as 5 de Diciembre de 2020.

```
10     "07": 'Julio',
11     "08": 'Agosto',
12     "09": 'Septiembre',
13     "10": 'Octubre',
14     "11": 'Noviembre',
15     "12": 'Diciembre'
16
17
18
19 def comprobar_fecha():
20     try:
21         fecha_str = input('\n Ingrese fecha "dd/mm/aaaa"...: ')
22         fecha = datetime.strptime(fecha_str, '%d/%m/%Y')
23         day = fecha.day
24         month = fecha.month
25         mes = mesesDic[str(month)]
26         year = fecha.year
27         print("La fecha es {} de {} de {}".format(day, mes, year))
28     except:
29         print("\n La fecha es incorrecta...")
30
31
32 comprobar_fecha()
```

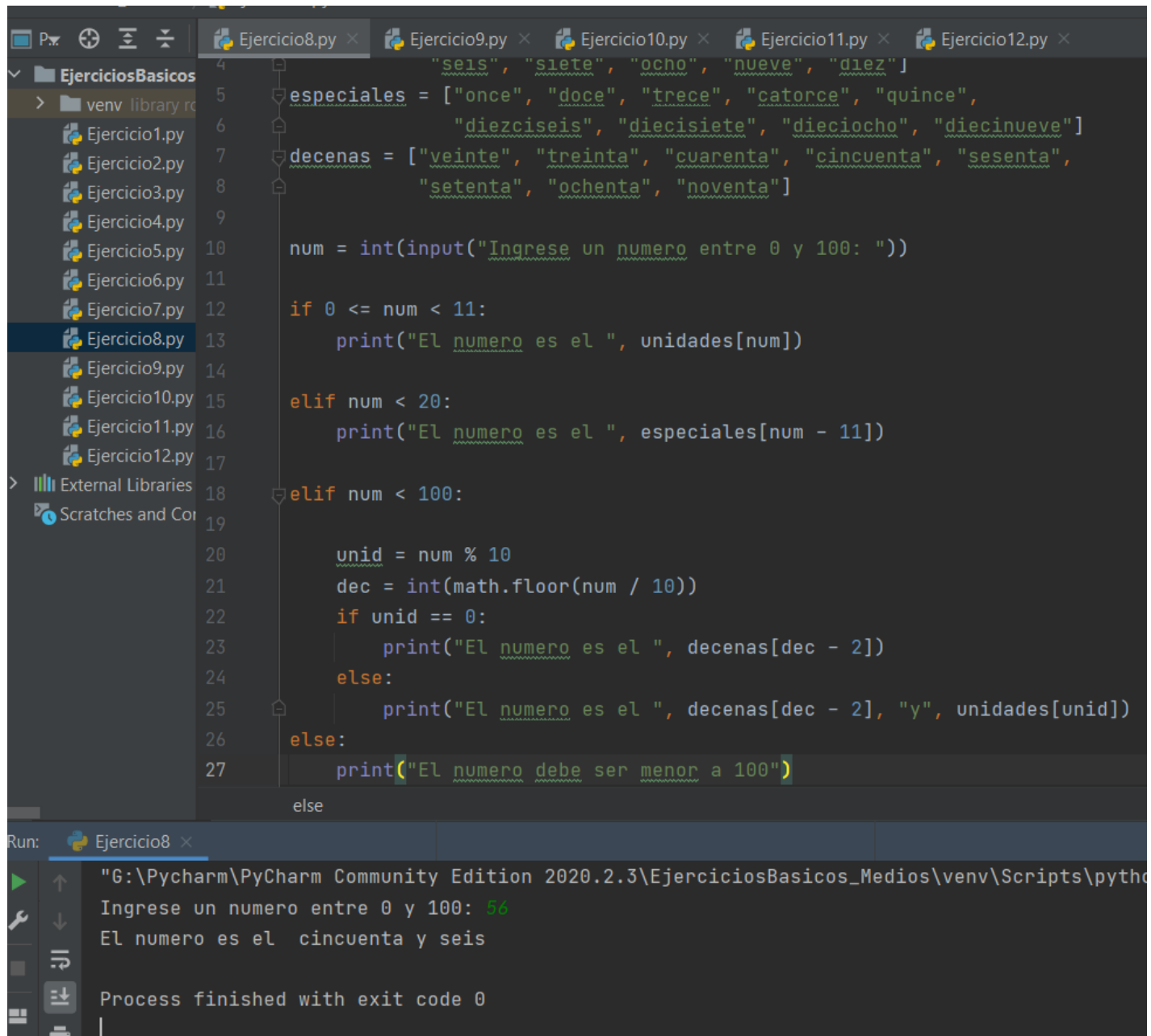
Run: Ejercicio7 x

```
"G:\Pycharm\PyCharm Community Edition 2020.2.3\EjerciciosBasicos_Medios\venv\Scripts
Ingrese fecha "dd/mm/aaaa"...: 05/12/2020
La fecha es 5 de Diciembre de 2020

Process finished with exit code 0
```

Run | TODO | Problems | Terminal | Python Console

Ejercicio 8:



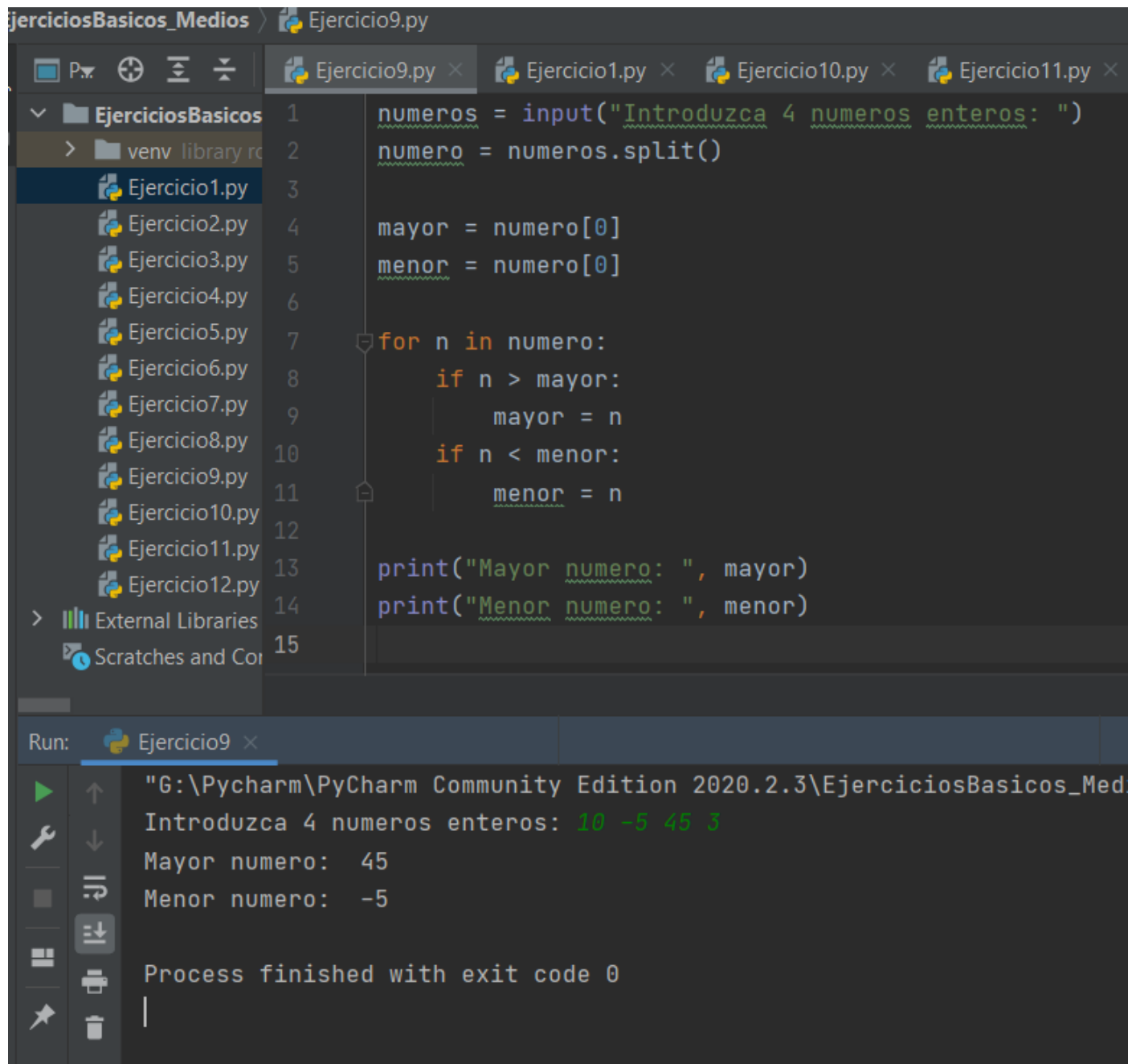
The screenshot displays the PyCharm IDE interface. The top pane shows the code for `Ejercicio8.py`, which implements a number-to-words converter in Spanish. The code uses lists for units (`unidades`), special cases (`especiales`), and decades (`decenas`). It includes logic to handle numbers from 0 to 100, including tens and hundreds. The bottom pane shows the execution output, where the user has entered the number 56, resulting in the output "El numero es el cincuenta y seis".

```
4         "seis", "siete", "ocho", "nueve", "diez"]
5     especiales = ["once", "doce", "trece", "catorce", "quince",
6                 "diezaseis", "diecisiete", "dieciocho", "diecinueve"]
7     decenas = ["veinte", "treinta", "cuarenta", "cincuenta", "sesenta",
8               "setenta", "ochenta", "noventa"]
9
10    num = int(input("Ingrese un numero entre 0 y 100: "))
11
12    if 0 <= num < 11:
13        print("El numero es el ", unidades[num])
14
15    elif num < 20:
16        print("El numero es el ", especiales[num - 11])
17
18    elif num < 100:
19
20        unid = num % 10
21        dec = int(math.floor(num / 10))
22        if unid == 0:
23            print("El numero es el ", decenas[dec - 2])
24        else:
25            print("El numero es el ", decenas[dec - 2], "y", unidades[unid])
26    else:
27        print("El numero debe ser menor a 100")
28
29    else
```

Run: Ejercicio8 ×

"G:\Pycharm\PyCharm Community Edition 2020.2.3\EjerciciosBasicos_Medios\venv\Scripts\python.exe"
Ingrese un numero entre 0 y 100: 56
El numero es el cincuenta y seis
Process finished with exit code 0

Ejercicio 9:



The screenshot displays the PyCharm IDE interface. The left sidebar shows a project named 'EjerciciosBasicos_Medios' with a file explorer containing various Python files. The main editor window is open to 'Ejercicio9.py', which contains the following Python code:

```
1 numeros = input("Introduzca 4 numeros enteros: ")
2 numero = numeros.split()
3
4 mayor = numero[0]
5 menor = numero[0]
6
7 for n in numero:
8     if n > mayor:
9         mayor = n
10    if n < menor:
11        menor = n
12
13 print("Mayor numero: ", mayor)
14 print("Menor numero: ", menor)
15
```

Below the editor, the 'Run' tab is active, showing the execution output for 'Ejercicio9'. The output indicates the program was run from the path 'G:\Pycharm\PyCharm Community Edition 2020.2.3\EjerciciosBasicos_Medios'. The user input was '10 -5 45 3', and the program correctly identified the maximum value as 45 and the minimum value as -5. The process finished with exit code 0.

```
Run: Ejercicio9
"G:\Pycharm\PyCharm Community Edition 2020.2.3\EjerciciosBasicos_Medios
Introduzca 4 numeros enteros: 10 -5 45 3
Mayor numero: 45
Menor numero: -5
Process finished with exit code 0
```

Ejercicio 10:

```
EjerciciosBasicos_Medios > Ejercicio10.py
import datetime

try:
    hora = input('Hora: ')
    hora_ = datetime.datetime.strptime(hora, '%H:%M:%S')

    horas = hora_.hour
    minutos = hora_.minute
    segundos = hora_.second

    if horas < 24 and minutos < 60 and segundos < 60:
        if segundos < 59 and segundos >= 0:
            print(horas, ":", minutos, ":", (segundos + 1))
        else:
            if segundos == 59:
                if minutos == 59:
                    if horas == 23:
                        print("00:00:00")
                    else:
                        print(horas + 1, ": 00: 00")
                else:
                    print(horas, ":", minutos + 1, ": 00")
            else:
                print(horas, ":", minutos + 1, ": 00")
    except:
        print("\n La hora es incorrecta...")

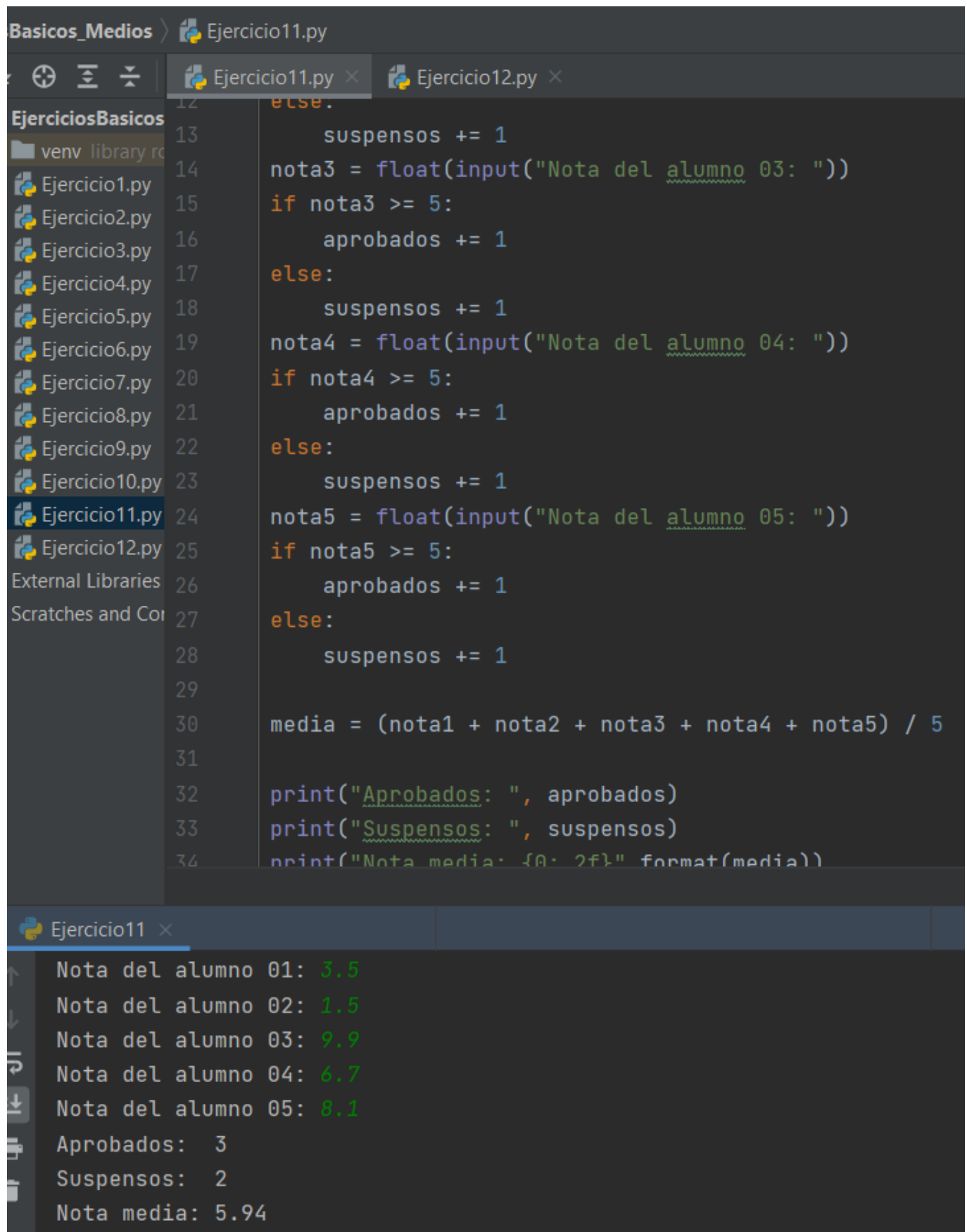
except
```

Run: Ejercicio10 ×

```
"G:\Pycharm\PyCharm Community Edition 2020.2.3\EjerciciosBasicos_Medios\venv\Scripts\python.exe" "G:\Pycharm\PyCharm Community Edition 2020.2.3\EjerciciosBasicos_Medios\Ejercicio10.py"
Hora: 14:22:59
14 : 23 : 00

Process finished with exit code 0
```

Ejercicio 11:



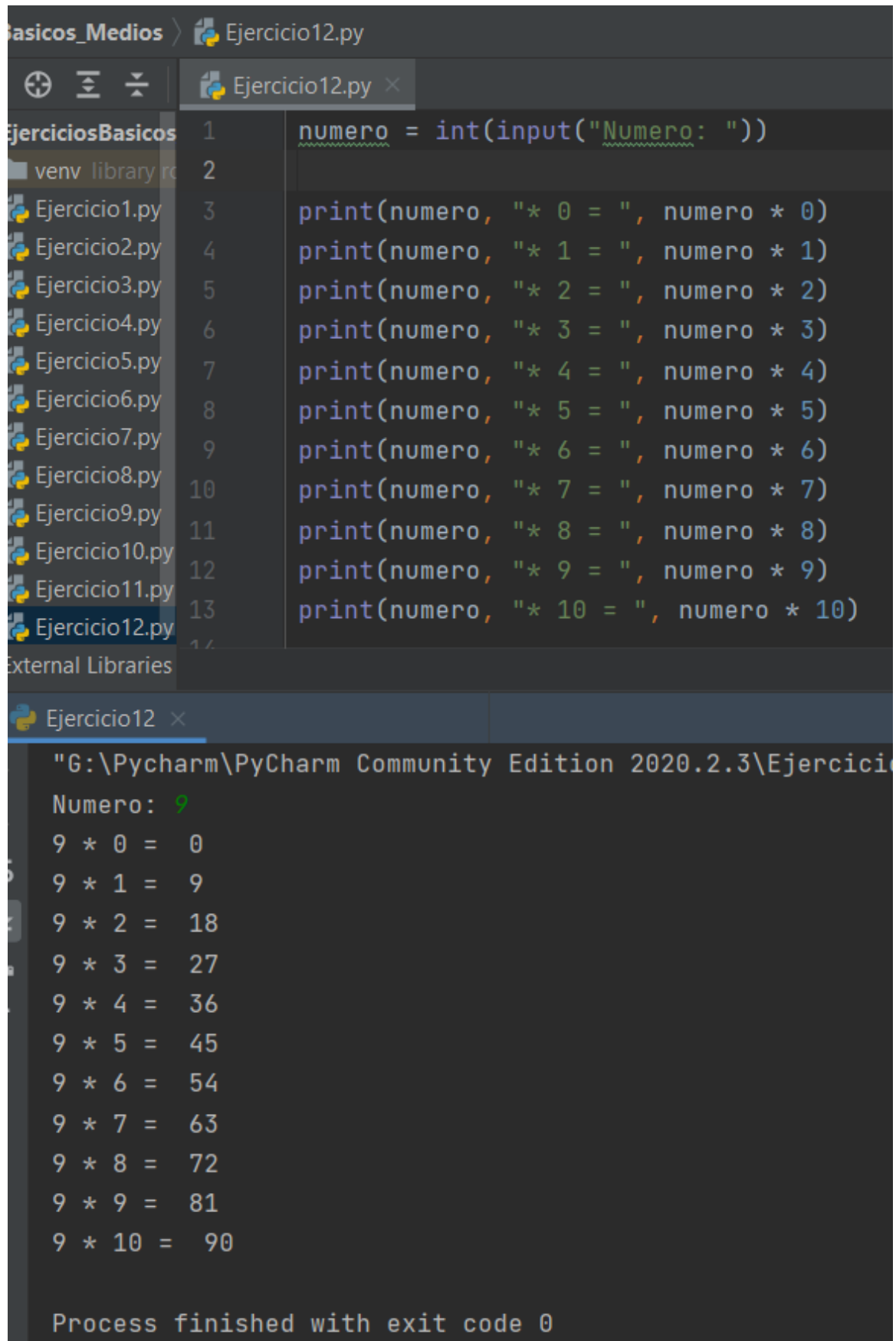
The image shows a Python IDE with a file explorer on the left and a code editor on the right. The file explorer shows a directory named 'Basicos_Medios' containing several Python files, with 'Ejercicio11.py' selected. The code editor displays the following Python code:

```
12 else:
13     suspensos += 1
14 nota3 = float(input("Nota del alumno 03: "))
15 if nota3 >= 5:
16     aprobados += 1
17 else:
18     suspensos += 1
19 nota4 = float(input("Nota del alumno 04: "))
20 if nota4 >= 5:
21     aprobados += 1
22 else:
23     suspensos += 1
24 nota5 = float(input("Nota del alumno 05: "))
25 if nota5 >= 5:
26     aprobados += 1
27 else:
28     suspensos += 1
29
30 media = (nota1 + nota2 + nota3 + nota4 + nota5) / 5
31
32 print("Aprobados: ", aprobados)
33 print("Suspensos: ", suspensos)
34 print("Nota media: {:.2f}".format(media))
```

Below the code editor, there is a terminal window showing the execution output for 'Ejercicio11':

```
Nota del alumno 01: 3.5
Nota del alumno 02: 1.5
Nota del alumno 03: 9.9
Nota del alumno 04: 6.7
Nota del alumno 05: 8.1
Aprobados: 3
Suspensos: 2
Nota media: 5.94
```

Ejercicio 12:



The screenshot displays the PyCharm IDE interface. The top pane shows the code for `Ejercicio12.py`, which prompts the user for a number and then prints multiplication results from 0 to 10. The bottom pane shows the execution output, where the number 9 was entered, resulting in a list of multiplication facts from 9 * 0 to 9 * 10. The process finished with exit code 0.

```
basicos_Medios > Ejercicio12.py
Ejercicio12.py x
EjerciciosBasicos 1 numero = int(input("Numero: "))
venv library re 2
Ejercicio1.py 3 print(numero, "* 0 = ", numero * 0)
Ejercicio2.py 4 print(numero, "* 1 = ", numero * 1)
Ejercicio3.py 5 print(numero, "* 2 = ", numero * 2)
Ejercicio4.py 6 print(numero, "* 3 = ", numero * 3)
Ejercicio5.py 7 print(numero, "* 4 = ", numero * 4)
Ejercicio6.py 8 print(numero, "* 5 = ", numero * 5)
Ejercicio7.py 9 print(numero, "* 6 = ", numero * 6)
Ejercicio8.py 10 print(numero, "* 7 = ", numero * 7)
Ejercicio9.py 11 print(numero, "* 8 = ", numero * 8)
Ejercicio10.py 12 print(numero, "* 9 = ", numero * 9)
Ejercicio11.py 13 print(numero, "* 10 = ", numero * 10)
Ejercicio12.py 14
External Libraries

Ejercicio12 x
"G:\Pycharm\PyCharm Community Edition 2020.2.3\Ejercicio
Numero: 9
9 * 0 = 0
9 * 1 = 9
9 * 2 = 18
9 * 3 = 27
9 * 4 = 36
9 * 5 = 45
9 * 6 = 54
9 * 7 = 63
9 * 8 = 72
9 * 9 = 81
9 * 10 = 90

Process finished with exit code 0
```