

## Programming Workshop 1: Birthdates: Pseudocode

### Birthdate 1: Output Birthdate: Pseudocode

Get name  
Get day of birth date  
Get month of birth date  
Get year of birth date  
Output message "Hello" + name + "your birthdate is " + birthdate (in format d/m/y)

### Birthdate 2: Output Days Alive: Pseudocode

Get name  
Get day of birth date  
Get month of birth date  
Get year of birth date  
**Get today's date (from datetime function)**  
**Calculate number days alive (today's date – birth date)**  
Output message "Hello" + name + "your birthdate is " + birthdate (in format d/m/y)  
**Output value of number of days alive**

### Birthdate 3: Output Days Alive with validation

Get name  
Get day of birth date  
**If day of birth date not an integer or in range 1 to 31 get again**  
Get month of birth date  
**If month of birth date not an integer or in range 1 to 12 get again**  
Get year of birth date  
**If year of birth date not a 4 digit integer or in the future get again**  
Get today's date (from datetime function)  
Calculate number days alive (today's date – birth date)  
Output message "Hello" + name + "your birthdate is " + birthdate (in format d/m/y)  
Output value of number of days alive

### Birthdate : Extension Work:

Work out number hours alive  
Work out number minutes alive  
Work out number seconds alive

## Programming Workshop 1: Birthdates: Code Snippets

### Birthdate 1: Output Birthdate: Code snippet

```
username = input("What is your name?: ")
day = input("What is the day you were born? (1-31): ")
month = input("What is the month you were born? (1-12):")
year = input("What is the year you were born (in 4 digit format): ")
print ("Hello", username)
print ("Your birthdate is",day,"/",month,"/",year)
```

### Birthdate 2: Output Days Alive: Code snippet

```
import datetime    #for date calculation
username = input("What is your name?: ")
day = input("What is the day you were born? (1-31): ")
month = input("What is the month you were born? (1-12):")
year = input("What is the year you were born (in 4 digit format): ")
numdays = datetime.date.today() - datetime.date(int(year), int(month), int(day))
print ("Hello", username)
print ("Your birthdate is",day,"/",month,"/",year)
print ("You have been alive for",numdays.days,"days")
```

### Birthdate 3: Output Days Alive with validation: Code snippet

```
import datetime    #for date calculation
username = input("What is your name?: ")
day = input("What is the day you were born? (1-31): ")
#error handling for day input - digit and range 1 to 31
while not day.isdigit() or 0 < int(day) > 31:
    day = input("Try again! What is the day you were born? (1-31):")
month = input("What is the month you were born? (1-12):")
#error handling for month input - digit and range 1 to 12
while not month.isdigit() or 0 < int(month) > 12:
    month = input("Try again! What is the month you were born? (1-12):")
year = input("What is the year you were born (in 4 digit format and not in future): ")
#error handling for year input - digit and 4 characters and not in future
while not year.isdigit() or len(year) != 4 or int(year) > datetime.date.today().year:
    year = input("Try again! What is the year you were born (in 4 digit format and not in future): ")
numdays = datetime.date.today() - datetime.date(int(year), int(month), int(day))
print ("Hello", username)
print ("Your birthdate is",day,"/",month,"/",year)
print ("You have been alive for",numdays.days,"days")
```

### Birthdate : Extension: Code snippet

```
numhours = numdays.days * 24
nummins = numhours * 60
numsecs = nummins * 60

print ("Which is",numhours,"hours or",nummins,"minutes or",numsecs,"seconds!")
```