Substring

**Note to marker:** The suggested solutions to the programming task are all **possible** solutions. There are many alternatives that would still produce the same outcome.

# Code snippets .

Access the substring

|  | word[1:3] |
| --- | --- |

Find a substring using the in operator

|  | if "12" in username: |
| --- | --- |

Concatenate multiple strings

|  | fish = "Flounder"  name = "Darwin"  fishname = fish + name |
| --- | --- |

Check if a character is a number

|  | character.isdecimal() |
| --- | --- |

# Task: Username .

A school technician requires a program that will generate usernames for the new Year 7 cohort. Each username should have:

* The starting year
* The surname
* The first initial

The username should look like this: 20SurnameInitial. So if a learner starts in the year 2020, and their first name is Ronald, and their last name is Smith, then their username would be: 20SmithR

Create a system that will allow a user to enter their starting year, surname, and first name. The system should then output the username in the format shown above.

**Paste your completed code below:**

| print("Starting year:")  startyear = input()  print("First name:")  firstname = input()  print("Surname:")  surname = input()  yearsub = startyear[0:2]  initial = firstname[0]  username = yearsub + surname + initial  print(username) |
| --- |

# Task: Year-group checker .

A school technician requires a program that will let teachers know which year group a learner is in, based on their username. The program should:

* Prompt the user to enter a username
* Check the first two digits of the username
* Reveal which year group the learner is in

Here is a table to show the start digits against the year group. This will help you with your program:

| 20 | Year 7 |
| --- | --- |
| 19 | Year 8 |
| 18 | Year 9 |
| 17 | Year 10 |
| 16 | Year 11 |

**Paste your completed code below:**

| print("Username:")  username = input()  if "20" in username:  print("User in Y7")  elif "19" in username:  print("User in Y8")  elif "18" in username:  print("User in Y9")  elif "17" in username:  print("User in Y10")  elif "16" in username:  print("User in Y11")  else:  print("No year group found") |
| --- |

# Task: Password .

A school technician requires a program that will check if a password contains a number and is at least eight characters. The program should:

* Prompt the user to enter a password
* Check the length of the password meets the requirements
* Check that there is at least one number in the password
* Continue to ask for a password until these requirements are met

**Paste your completed code below:**

| passlength = 0  numbers = 0  passinvalid = passlength < 8 or numbers == 0  while passinvalid:  print("Password:")  password = input()  passlength = len(password)  numbers = 0  for character in password:  if character.isdecimal():  numbers = numbers + 1  passinvalid = passlength < 8 or numbers == 0  print("Valid password entered") |
| --- |

# Explorer task .

**Task 1**

There are three methods for checking if a string contains a number. You have already used str.isdecimal(), what are the other two?

**Answer:**

| str.isnumeric()  str.isdigit() |
| --- |

**Hint:** Use the [Python documentation](https://ncce.io/stringpythondoc) (ncce.io/stringpythondoc) to find out.

**Task 2**

Complete some online research to find out the difference between each method. Write your findings below:

**Findings:**

| isdecimal() is used to check if a character is a decimal number. It will not allow for fractions, subscript, or superscript.  isdigit() is used to check if a character is a decimal, including subscript, or superscript.  isnumeric() is used to check if a character is a decimal, including subscript, superscript, and fractions. |
| --- |