



HOUSTONE
SCHOOL

Year 8 – 100% Book Term 1 (Part 2) 2022

NAME	
FORM GROUP	

Computer Science

Python 3 cheatsheet (the basics)



Interact with the user (input and output)

Print a message

```
print('Hello, world!')
```

Print multiple values (of different types)

```
ndays = 365  
print('There are', ndays, 'in a year!')
```

Asking the user for a string

```
name = input('What is your name? ')
```

Asking the user for a whole number (an integer)

```
num = int(input('Enter a number: '))
```

Decide between options

Decide to run a block (or not)

```
x = 3  
if x == 3:  
    print('x is 3!')
```

Decide between two blocks

```
mark = 80  
if mark >= 50:  
    print('pass!')  
else:  
    print('fail')
```

Decide between many blocks

```
mark = 80  
if mark >= 65:  
    print('credit!')  
elif mark >= 50:  
    print('pass!')  
else:  
    print('fail')
```

elif can be used without else

elif can be used many times

Are two values equal?

```
x == 3
```

△ two equals signs, not one

Are two values not equal?

```
x != 3
```

Less than another?

```
x < 3
```

Greater than another?

```
x > 3
```

Less than or equal to?

```
x <= 3
```

Greater than or equal to?

```
x >= 3
```

The answer is a Boolean:

```
True or False
```

String manipulation

Compare two strings

```
msg = 'hello'  
if msg == 'hello':  
    print('howdy')
```

Less than another string?

```
if msg < 'n':  
    print('a-m')  
else:  
    print('n-z')
```

△ strings are compared character at a time (lexicographic order)

Is a character in a string?

```
'e' in msg
```

Is a string in another string?

```
'ell' in msg
```

Convert to uppercase

```
msg.upper()  
also Lower and title
```

Count a character in a string

```
msg.count('l')
```

Replace a character or string

```
msg.replace('l', 'X')
```

Delete a character or string

```
msg.replace('l', '')
```

Is the string all lowercase?

```
msg.islower()
```

also isupper and istitle

Text (strings)

Single quoted

```
'perfect'
```

Double quoted

```
"credit"
```

Multi-line

```
'''Hello,  
World!'''
```

Add (concatenate) strings

```
'Hello' + 'World'
```

Multiply string by integer

```
'Echo...' * 4
```

Length of a string

```
len('Hello')
```

Convert string to integer

```
int('365')
```

Repeat a block (a fixed number of times)

Repeat a block 10 times

```
for i in range(10):  
    print(i)
```

Sum the numbers 0 to 9

```
total = 0  
for i in range(10):  
    total = total + i  
    print(total)
```

Repeat a block over a string

```
for c in 'Hello':  
    print(c)
```

Keep printing on one line

```
for c in 'Hello':  
    print(c, end=' ')
```

Repeat a block over list (or string) indices

```
msg = 'I grok Python!'  
for i in range(len(msg)):  
    print(i, msg[i])
```

Variables

Creating a variable

```
celsius = 25
```

Using a variable

```
celsius*9/5 + 32
```

Whole numbers (integers)

Addition and subtraction

```
365 + 1 - 2
```

Multiplication and division

```
25*9/5 + 32
```

Powers (2 to the power of 8)

```
2**8
```

Convert integer to string

```
str(365)
```

Count from 0 to 9

```
range(10)
```

△ range starts from 0 and goes up to, but not including, 10

Count from 1 to 10

```
range(1, 11)
```

Count from 10 down to 1

```
range(10, 0, -1)
```

Count 2 at a time to 10

```
range(0, 11, 2)
```

Count down 2 at a time

```
range(10, 0, -2)
```

Putting it together: Celsius to Fahrenheit converter

Ask the user for a temperature in degrees Celsius

```
celsius = int(input('Temp. in Celsius: '))
```

Calculate the conversion

```
fahrenheit = celsius*9/5 + 32
```

Output the result

```
print(fahrenheit, 'Fahrenheit')
```



Learn more in *Intro. to Programming @ groklearning.com*

English

Knowledge Organiser – Shakespearean Heroes and Villains

Key Vocabulary	
1. Hero	A real person or a main fictional character who, in the face of danger, combats adversity through feats of ingenuity, courage, or strength.
2. Heroic	Having the traits of a hero
3. Virtue	Behaviour showing high moral standards.
4. Noble	Having or showing fine personal qualities or high moral principles.
5. Flawed	Having a weakness in character.
6. Anti-hero	A central character who lacks the characteristics an audience associates with a conventional hero
7. Admiration	Respect and warm approval.
8. Rhetoric	The art of effective or persuasive speaking or writing
9. Villain	A character whose evil actions or motives are important to the plot
10. Villainous	Having the traits of a villain
11. Jealousy	The thoughts or feelings of insecurity, fear, and concern over a relative lack of possessions or safety.
12. Cunning	Having or showing skill in achieving one's ends by deceit or evasion.
13. Manipulation	The action of manipulating or controlling something in a skilful manner.
14. Spiteful	Showing or caused by malice.
15. Depraved	Morally corrupt; wicked.
16. Misdeeds	A wicked or illegal act.
17. Tragic Hero	A character in a dramatic tragedy who has virtuous and sympathetic traits but ultimately meets with suffering or defeat.
18. Suffering	The state of undergoing pain, distress, or hardship.
19. Calamity	An event causing great and often sudden damage or distress; a disaster.
20. Flaw	A mark, blemish, or other imperfection which mars a substance, object or person.
21. Elite	A select group that is superior in terms of ability or qualities to the rest of a group or society.
22. Ambition	A strong desire to do or achieve something.

23. Hubris	Excessive pride or self-confidence.
24. Conflicted	Having or showing confused and mutually inconsistent feelings.
25. Fourth Wall	A performance convention in which an invisible, imaginary wall separates actors from the audience.
26. Complicit	Involved with others in an activity that is unlawful or morally wrong.
27. Pestilence	A fatal disease or plague.
28. Complex	Consisting of many different and connected parts.
29. Depth	The quality of being intense or extreme.
30. Insecurity	Uncertainty or anxiety about oneself; lack of confidence.
31. Slavery	The state and the condition of being a slave, who is someone forbidden to quit their service for an enslaver, and who is treated by the enslaver as their property.
32. Usurpation	The illegitimate taking of power, especially over a monarch (King or Queen)
33. Fallen Hero	A former hero whose actions lead to a decline in moral standards.
34. Bloodlust	The desire to kill or to see people killed.
35. Reciprocate	Respond to (a gesture or action) by making a corresponding one.
36. Horrific	Something causing horror or pain.
37. Redemption	An act of redeeming or atoning for a fault or mistake
38. Repentance	

Key Characters	
39. Henry V	Hero and English King. United his people in a war against the French
40. Richard III	Villain and English King. His physical deformity and insecurities lead him to enact cruelty on his people.
41. Macbeth	Tragic hero and Scottish King. A brave warrior whose ambition leads him to become a murderer and usurper.
42. Othello	Tragic hero and Venetian general. Allowed his jealousy regarding his new wife to cloud his ability to rule and to love.
43. Romeo	Tragic hero and youthful lover. Allows his love for Juliet to lead to reckless and impulsive emotions.
44. Iago	Villain and Venetian soldier. Cannot come to terms with the promotions of Othello and Cassio, and vows revenge against them.
45. Caliban	Villain and enslaved islander. After being enslaved by the sorcerer Prospero, Caliban vows revenge against him.

Geography

YEAR 8 – UNIT 2 – POPULATION – KNOWLEDGE MAP

1. **Population** refers to the number of people in a place. The study of population is called **demographics**. When a population is counted it is called a **census**.
2. **Thomas Malthus** held a **pessimistic** view of population. He believed that the population of Earth would become too high to support itself and there would not be enough food, clean water and natural resources for us all and as a result some of us would die. Esther Boserup held an optimistic view of population. She believed that no matter how big the Earth's population became in the future, new technology would ensure we would all survive and adapt.
3. Some areas of the world have lots of people, other parts have very few. This is called **population density**. Major towns and cities have high population density, whereas rural communities tend to have a very low population density. There are a number of reasons as to why some areas are more populated than others, they include, transport, politics, climate and relief.
4. **Population pyramids** are a visual representation of population data. They show how many males and females there are in each 5 year age band within the total population. They are useful for identifying trends within population data and for predicting the future of population in a country.
5. Populations grow and decline over time. There are a number of reasons that cause populations to grow, they include, lack of contraception, young people are needed to look after the elderly and children are needed to work on farms. There are a number of reasons why populations drop, they include, access to contraception and the emancipation of women.
6. **Migration** is the movement of people from one place to another. There are many different types of migrants. People move for many different reasons, these are called **push and pull factors**.

KEY WORDS

7.Population	The number of people in a place. This can be a village, a town, a city, a
8.Demographics	The study of population.
9.Census	An official count or survey of population.
10.Population Density	The number of people in 1km square.
11.Population Pyramid	A graphical illustration that shows the distribution of various age groups in
12.Birth Rate	The number of babies being born per 1000 people.
13.Death Rate	The number of people dying per 1000 people.
14.Contraception	Artificial techniques used to stop pregnancy. These include condoms and
15.Mechanisation	The process of technology being used to do jobs that used to be done by people.
16. Emancipation of Women	Gender equality. Women have the same opportunities as men.
17.Migration	The movement of people from place to another.
18.Push Factor	Something that makes you leave a place.
19.Pull Factor	Something that makes you want to move to a place.
20.Asylum Seeker	People have fled their home countries often because they feel their life is in danger. They wish to stay in another, safer country.
21..Ageing Population	When the number of elderly in the population grows.

22.Push factors are reasons why you want to leave a place, for example a lack of job opportunities, civil war or a natural disaster. **Pull factors** are reasons that make you want to move to a place, for example safety, security, good jobs and access to healthcare.

23.An ageing population is a population with a growing number of elderly people. As healthcare improves, people will live longer, creating an ageing population. An ageing population creates some problems, as the elderly need to be looked after by the government, hospitals beds are needed and pensions supplied. All of this costs money.

History 1

Reformation knowledge organiser

Timeline

1348: Arrival of the Black Death in England

1381: The Peasants' Revolt

1320-1384 life of John Wycliffe

1415 Jan Hus burned for heresy in Prague

1450s Gutenberg invented his printing press in Germany and printed the first Bible

1512 John Colet spoke about reforming the Church but did not criticise the Pope

1517 Luther published his 95 'Theses' – criticisms of the Church

1526 Tyndale's English Bibles were burned in St Paul's Cathedral

1533-4 Henry VIII rejected the authority of the Pope and made himself head of the Church in England

1536-8 Henry closed down monasteries in England and introduced some religious changes including an English Bible

1547-1553 reign of Edward VI introduced Protestant changes including English prayer book for church services

1553-8 Mary I restored Catholicism in England

1558 Elizabeth I reintroduced a moderate form of Protestantism including English Bible and services.

Reformers/ heretics

1. John Wycliffe- criticized the power of the Pope and translated the Bible into English

2. Jan Hus – followed Wycliffe's ideas in Bohemia, where his followers rebelled against the Pope

3. William Tyndale – translated the Bible into English and criticised the power of the Pope

4. John Colet and Desiderius Erasmus – promoted education and wanted to reform the Church but supported the Pope

5. Martin Luther – monk from Germany, in 1517 set out 95 problems he had with the Catholic Church

6. Thomas Cromwell – Henry's chief minister; organised 'Break with Rome'; Protestant

Key words

7. Purgatory – a place similar to Hell, souls would be punished there before going to heaven

8. Indulgences – certificates sold by the Church claiming to reduce their time in Purgatory by a number of years

9. Intercession – saints were believed to be able to speak to God on behalf of a person who prayed to them, to get help for them during their life or after their death

10. Mass/Eucharist – main church service remembering Jesus's death, with bread and wine; Catholics believed the bread and wine became Jesus's body and blood, but Protestants disagreed

11. Heresy – wrong beliefs: Catholics believed Protestantism was heresy, and vice versa

Morebath

12. Sir Christopher- priest from 1519-1574

13. St Sidwell – a local saint; Sir Christopher gave an image of her to the parish church in 1519

14. Our Lady – St Mary, mother of Jesus, a popular saint in Morebath

15. Stores – groups of villagers who raised money to fund the lights

16. Lights – candles kept burning in front of images of saints in the church

17. Bequeath – to give something when you die

18. Vestments – beautiful robes worn by the priest for church services

19. Ales – social events held in the church ale house to raise funds for the stores etc.

Key places

20. Morebath- a village in Devon

21. East Anglia – Norfolk, Suffolk, Essex, Cambridgeshire- Protestantism was most popular here

22. West Country – Cornwall, Devon, Somerset, rebelled against Protestantism in 1549

23. Wittenburg – town in Germany where Luther taught at the university

24. Prague – capital of Bohemia, now in Czech Republic

25. Oxford and Cambridge – location of universities in England

History 2

Elizabethan England and the wider world

Timeline

- 1558 accession of Elizabeth I as queen of England
- 1572 Sir Francis Drake made an alliance with *cimarrons* in Panama to seize Spanish silver
- 1577-81 Sir Francis Drake circumnavigated the world
- 1588 Spanish Armada – attempted invasion of England by King Philip of Spain
- 1590s Nine Years' War in Ireland against English control and plantations
- 1603 death of Elizabeth I

People

- 1) Martin Frobisher, Humphrey Gilbert, Walter Raleigh – explorers who looked for alternative routes to sail to Asia and/or sources of gold and spices to trade

Companies

- 2) **Trading company** – a group of merchants who secured a charter from Elizabeth I to trade in a particular place or commodity
- 3) **East India Company** formed 1600 to trade in Asia

- 4) **privateer** – a pirate with permission from the queen to attack Spanish ships
- 5) **circumnavigate** – to sail all the way round the world
- 6) **voyage** – a journey by sea
- 7) **enslaved** – forcibly transported and made to work without wages or freedom, treated as property

- 8) **cimarrons** – escaped former enslaved people in the Spanish Empire
- 9) **Diego** – a cimarron, originally from West Africa, who helped Drake and joined his crew
- 10) **Spanish Empire** – territory ruled by Spain in the Americas including Mexico and Peru, where enslaved people mined silver and gold which was shipped to Spain
- 11) **Philip II** – king of Spain
- 12) **Armada** - a large fleet of ships prepared to invade England



- 13) **ambassador** – representative of one country's monarch or government in another country
- 14) **Abd el-Ouahed ben Messaoud** – Moroccan ambassador to Queen Elizabeth I
- 15) **alliance** - agreement between two countries, usually to attack another country or to defend themselves
- 16) **trade** – buying one commodity in exchange for another
- 17) **commodity** – something which can be traded, for example, silk, spices, sugar, cloth, gold, silver

- 18) Elizabeth I made England a Protestant country
- 19) Ireland and Spain were Catholic
- 20) **civilised** – polite, sophisticated, up-to-date; the English thought the Irish were uncivilised
- 21) **plantations** – in Ireland, Elizabeth's government took land from Catholics and gave it to Protestants, in order to 'plant' Protestants there and make it a Protestant country

Spanish 1

Vocabulary 5a – Pets

01 – ¿Tienes mascotas?	Do you have any pets?
02 – Tengo un caballo	I have a horse
03 – Tengo una cobaya	I have a guinea pig
04 – Tengo un conejo	I have a rabbit
05 – Tienes un gato	You have a cat
06 – Tienes un perro	You have a dog
07 – Tienes un pez	You have a fish
08 – Tiene un ratón	He/She has a mouse
09 – Tiene una serpiente	He/She has a snake
10 – No tengo mascotas	I don't have any pets

Vocabulary 5b – Colours

01 – ¿Cómo es? / ¿Cómo son?	What is it like? / What are they like?
02 – Blanco/a	White
03 – Amarillo/a	Yellow
04 – Negro/a	Black
05 – Rojo/a	Red
06 – Verde	Green
07 – Marrón	Brown
08 – Azul	Blue
09 – Rosa	Pink
10 – Naranja	Orange

Vocabulary 6a – Small Words

01 – No	No / Not
02 – Sí	Yes
03 – Mi	My (singular)
04 – Mis	My (plural)
05 – Tu	Your (singular)
06 – Tus	Your (plural)
07 – Su	His / Her (singular)
08 – Sus	His / Her (plural)
09 – Mi cantante favorita	My favourite singer
10 – Su programa favorito	His / Her favourite programme

Spanish 2

Vocabulary 6b – Small Words

01 – Mi hermana	My sister
02 – Mis hermanos	My siblings / My brothers
03 – Tu perro	Your dog
04 – Sus mascotas	His / Her pets
05 – muy	very
06 – bastante	quite
07 – un poco	a little / a bit
08 – a la derecha	on the right
09 – a la izquierda	on the left
10 – Creo que...	I think that...

Vocabulary 7a – Opinions

01 – ¿Qué te gusta hacer?	What do you like to do?
02 – Me gusta...	I like...
03 – Me gusta mucho...	I really like...
04 – No me gusta...	I don't like...
05 – No me gusta nada...	I don't like at all...
06 – navegar por Internet	to surf the Internet
07 – chatear	to chat online
08 – escuchar música	to listen to music
09 – jugar a los videojuegos	to play videogames
10 – mandar SMS	to send text messages

Vocabulary 7b – Reasons

01 – ver la televisión	to watch TV
02 – leer	to read
03 – escribir correos	to write emails
04 – salir con mis amigos	to go out with my friends
05 – ...porque es...	...because it's...
06 – ...porque no es...	...because it's not...
07 – aburrido/a	boring
08 – interesante	interesting
09 – divertido/a	amusing, fun, funny
10 – estúpido/a	stupid

Spanish 3

Vocabulary 8a – Hobbies

01 – ¿Qué haces en tu tiempo libre?	What do you do in your free time?
02 – Bailo	I dance
03 – Bailas	You dance
04 – Canto karaoke	I sing karaoke
05 – Hablo con mis amigos	I talk with my friends
06 – Monto en bici	I ride my bike
07 – Saco fotos	I take photos
08 – Saca fotos	He/She takes photos
09 – Toco la guitarra	I play the guitar
10 – Tocamos la guitarra	We play the guitar

Vocabulary 8b – Frequency

01 – Bailáis	You (plural) dance
02 – Bailan	They dance
03 – Canta karaoke	He/She sings karaoke
04 – Cantamos karaoke	We sing karaoke
05 – Sacamos fotos	We take photos
06 – Toca la guitarra	He/She plays the guitar
07 – A veces	Sometimes
08 – De vez en cuando	From time to time
09 – Nunca	Never
10 – Todos los días	Every day

Vocabulary 9a – Weather

01 – ¿Qué tiempo hace?	What is the weather like?
02 – Hace calor	It is hot
03 – Hace frío	It is cold
04 – Hace sol	It is sunny
05 – Hace buen tiempo	It is good weather
06 – Hace mal tiempo	It is bad weather
07 – Lluve	It is raining
08 – Nieva	It is snowing
09 – Cuando...	When...
10 – ¿Qué haces cuando llueve?	What do you do when it's raining?

Spanish 4

Vocabulary 9b – Seasons

01 – Estaciones	Seasons
02 – En...	In / On / At
03 – Primavera	Spring
04 – Verano	Summer
05 – Otoño	Autumn
06 – Invierno	Winter
07 – generalmente	generally
08 – con	with
09 – mucho	a lot
10 – ¿Y tú?	And you?

Vocabulary 10a – Sports

01 – ¿Qué deporte haces?	What sports do you do?
02 – Hago artes marciales	I do martial arts
03 – Hago atletismo	I do athletics
04 – Hago equitación	I do horseriding
05 – Hago gimnasia	I do gymnastics
06 – Hago natación	I do swimming
07 – Juego al baloncesto	I play basketball
08 – Juego al fútbol	I play football
09 – Juego al tenis	I play tennis
10 – Juego al voleibol	I play volleyball

Vocabulary 10b – Days of the Week

01 – Lunes	Monday
02 – Martes	Tuesday
03 – Miércoles	Wednesday
04 – Jueves	Thursday
05 – Viernes	Friday
06 – Sábado	Saturday
07 – Domingo	Sunday
08 – Los lunes	On Mondays
09 – Los martes	On Tuesdays
10 – Los miércoles	On Wednesdays