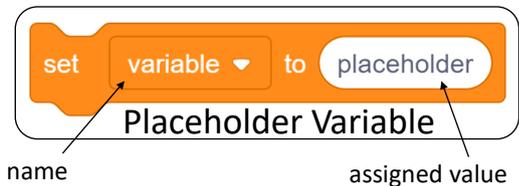


## Using a Variable as a Placeholder

### COMPLETION P1

Start Scratch and load  
placeholdercompletion



### Look in Karaoke sprite

Most of the code has been built, however the variables have not been added to the code.

Use the Karaoke planning below to complete the code



Karaoke

**Idea Level** My app will... My characters will be... The aim of the app will be...

To create a simple karaoke machine with a variable to change the name of the person in the song.

**Design Level** What will your characters do?

Speak the lyrics

Play the song instrumental only

Ask the user for their name and use it as a variable in the lyrics

**Design Level** (algorithm)

Start when touched or clicked

Hide jobs list from the other program

Show **user\_name** variable on the screen

Assign dolly to **user\_name** variable

Change stage background to spotlight-stage

Say karaoke

Say Music by Louis Armstrong

Say Here are lyrics and sound track from the original

Say singalong

Start hellodolly.mp3 sound

Say Oh, hello **user\_name** variable

Say Well, hello **user\_name** variable

Say It's so nice to to have you back where you belong

Say You're lookin' swell **user\_name** variable

Say I can tell **user\_name** variable

Say You're still glowin', you're still crowin', you're still goin' strong

Turn all sounds off

Say Now lets try it with another name

ask user to input their name

Assign the user answer to the **user\_name** variable

Start sound hellodolly.mp3

Say Oh, hello **user\_name** variable

Say Well, hello **user\_name** variable

Say It's so nice to to have you back where you belong

Say You're lookin' swell **user\_name** variable

Say I can tell **user\_name** variable

Say You're still glowin', you're still crowin', you're still goin' strong

Turn all sounds off

Notes

Find a singer for the sprite

Place him or her on a stage background

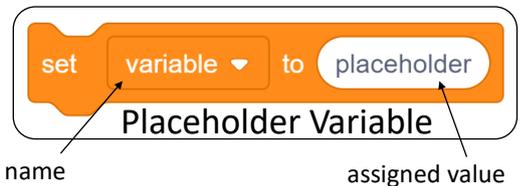
Variable can be called **user\_name**

Show the variable in top left hand corner of the screen

## Using a Variable as a Placeholder

### COMPLETION P2

Start Scratch and load  
placeholder



#### Look in Karaoke

USE & Run the code to answer the questions

- 1, What is the value of the **user\_name** variable at the start of the program?
- 2, What **changes** the value of the user\_name variable **half way** through the program?
- 3, Are there any limits to the value that can be assigned to the variable in the second half of the program?



Karaoke

Stop Karaoke running first using stop button

#### Look in quiz

USE & Run the code to answer the questions

- 1, What value did you give to user\_name in quiz when you first ran the program?
- 2, Does the value of user\_name change after it has been assigned by the user in the beginning?
- 3, How many join blocks are used inside the first say block?
- 4, How does the programmer use the user\_name variable in the first quiz question?

A  
B  
C



quiz

Stop quiz running first using stop button

#### Look in Which Job?

USE & Run the code to answer the questions

- 1, Which block stops the variable name and value being shown on the screen?
- 2, Which blocks displays the name and value on the screen?
- 3, Which block collects information from the user?
- 4, Which block stores the information inputted by the user?
- 5, Which blocks transfer the information from the input into the variable user\_name?



Which Job?

Now mark this page using the answer sheet

Name

## Using a Variable as a Placeholder COMPLETION P3

Start Scratch and load  
placeholder



set variable to placeholder  
Placeholder Variable

### Look in all the sprites

**MODIFY** make small changes or additions to the code

1, Change the value of the user\_name variable in the first half of the karaoke program. What did you change?



2, In the quiz last question Instead of saying user\_name the right answer is 26 change the code to say **The right answer is 26 user\_name**



Tick if you changed it

3, Add a question to the bottom of the quiz. Make sure you personalise it using the user\_name variable.



Tick if you added it with user\_name

4, In Which Job, change one of the jobs on the job list. What did you change?



5, Add a new job onto the list? Which block did you use?



**Lists** are places we can store more than one value.

Lists are **not** variables.

You will learn more about lists in the future

Now mark the modify section using the answer sheet

### DESIGN & CREATE

Do A then choose one or more from 1, 2 & 3



A, Use a variable to personalise a previously created program. Make sure you save it with a new name.

What did you call it?

1, Create a few quiz questions that have been personalised using a variable. Use the planning sheet on the next page to think through your design.

What did you call it?

2, Personalise a passage of text from a favourite book or your own writing using variables. Remember a variable can be a placeholder for any word or words not just a name. You can create as many variables as you need. Use the planning sheet on the next page to think through your design.

What did you call it?

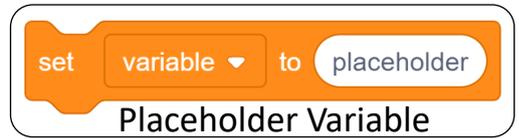
3, Personalise a new program using a variable? Use the planning sheet on the next page to think through your design.

What did you call it?

Name

# Using a Variable as a Placeholder

## COMPLETION P4



### Planner

**Idea Level** *My app will... My characters will be... The aim of the app will be...*

**Design Level** What will your characters do?

**Design Level** (Use **variables as placeholders** in your algorithms)

**Initialisation** Jot down how your sprites will always start in the same place

Name

# Using a Variable as a Placeholder

## COMPLETION ANSWER SHEET

set variable to placeholder  
Placeholder Variable

### Scratch 3

```
when this sprite clicked
hide list jobs
show variable user_name
set user_name to Dolly
switch backdrop to spotlight-stage
say Karoke for 2 seconds
say Original music by Louis Armstrong for 3 seconds
say Here are the original lyrics and sound track for 4 seconds
say Singalong for 2 seconds
start sound hellodolly.mp3
say join Oh, hello user_name for 3.5 seconds
say join Well, hello user_name for 3 seconds
say It's so nice to have you back where you belong for 5.5 seconds
say join You're lookin' swell, user_name for 3.8 seconds
say join I can tell, user_name for 2.5 seconds
say You're still glowin', you're still crowin', you're still goin' strong for 5.8 seconds
stop all sounds
say Now lets try it with another name for 2 seconds
ask What name shall we use? and wait
set user_name to answer
start sound hellodolly.mp3
say join Oh, hello user_name for 3.5 seconds
say join Well, hello user_name for 3 seconds
say It's so nice to have you back where you belong for 5.5 seconds
say join You're lookin' swell, user_name for 3.8 seconds
say join I can tell, user_name for 2.5 seconds
say You're still glowin', you're still crowin', you're still goin' strong for 5.8 seconds
stop all sounds
```

## Using a Variable as a Placeholder COMPLETION ANSWER SHEET

set variable to placeholder

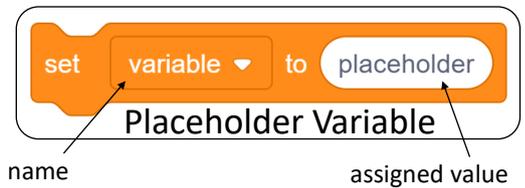
Placeholder Variable

Scratch 2

```
when this sprite clicked
hide list jobs
show variable user_name
set user_name to Dolly
switch backdrop to spotlight-stage
say Karoke for 2 secs
say Original music by Louis Armstrong for 3 secs
say Here are the original lyrics and sound track for 4 secs
say Singalong for 2 secs
play sound hellodolly.mp3
say join Oh, hello user_name for 3.5 secs
say join Well, hello user_name for 3 secs
say It's so nice to have you back where you belong for 5.5 secs
say join You're lookin' swell, user_name for 3.8 secs
say join I can tell, user_name for 2.5 secs
say You're still glowin', you're still crowin', you're still goin' strong for 5.8 secs
stop all sounds
say Now lets try it with another name for 2 secs
ask What name shall we use? and wait
set user_name to answer
play sound hellodolly.mp3
say join Oh, hello user_name for 3.5 secs
say join Well, hello user_name for 3 secs
say It's so nice to have you back where you belong for 5.5 secs
say join You're lookin' swell, user_name for 3.8 secs
say join I can tell, user_name for 2.5 secs
say You're still glowin', you're still crowin', you're still goin' strong for 5.8 secs
stop all sounds
```

## Using a Variable as a Placeholder

### COMPLETION P2 USE ANSWERS



### Karaoke Use Answers

**USE &** Run the code to answer the questions

1, What is the value of the **user\_name** variable at the start of the program?

**Dolly (1 mark)**

2, What **changes** the value of the user\_name variable **half way** through the program?

**The Karaoke user inputs the new value by typing their name (1 mark)**

3, Are there any limits to the value that can be assigned to the variable in the second half of the program? **No anything can be inputted even if it doesn't make sense (1 mark)**



Karaoke

### Quiz Use Answers

**USE &** Run the code to answer the questions

1, What value did you give to user\_name in quiz when you first ran the program?

**Any value is correct (1 mark)**

2, Does the value of user\_name change after it has been assigned by the user in the beginning?

**No (1 mark)**

3, How many join blocks are used inside the first say block?

**2 (1 mark)**

4, How does the programmer use the user\_name variable in the first quiz question?

**A To add the name to the question (1 mark)**

**B To add the name to the reply given if the user was wrong or didn't type 14 (1 mark)**

**C To add the name to the reply given if the user was right or did type 14 (1 mark)**



quiz

### Which Job? Use Answers

**USE &** Run the code to answer the questions

1, Which block stops the variable name and value being shown on the screen?

**Hide variable user\_name (1 mark)**

2, Which blocks displays the name and value on the screen?

**Show variable user\_name (1 mark)**

3, Which block collects information from the user?

**Ask what's your name (1 mark)**

4, Which block stores the information inputted by the user?

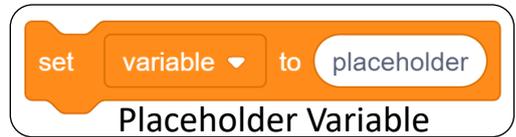
**Answer (1 mark)**

5, Which blocks transfer the information from the input into the variable user\_name?

**Set user\_name to answer (1 mark)**



Which Job?



## Modify Answers

**MODIFY** make small changes or additions to the code

1, Change the value of the `user_name` variable in the first half of the karaoke program. What did you change?



Change Dolly in set `user_name` block (1 mark)

2, In the quiz last question Instead of saying `user_name` the right answer is 26 change the code to say **The right answer is 26 `user_name`**



Tick (1 mark)

Tick if you changed it

3, Add a question to the bottom of the quiz. Make sure you personalise it using the `user_name` variable.



Tick (1 mark)

Tick if you added it with `user_name`

4, In Which Job, change one of the jobs on the job list. What did you change?



One job changed to another in add to jobs block (1 mark)

5, Add a new job onto the list? Which block did you use?



Add new job to jobs (1 mark)

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Lists are **not** variables.

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