

Data4Good Competition

Unlocking SAS Academic Resources



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Agenda

-  **Introductions and information**
SAS Certification and Badging program
-  **Study**
SAS Skill Builder for Students
Courses
-  **Practice**
SAS Viya Workbench for Learners
-  **Succeed!**
Assessment information
Resources
-  **Wrap-up & Q&A**

Who We Are

Global Academic Programs

Our Mission: Empowering Analytics for Academics



www.sas.com/academics

We support the next generation by providing **free software and resources** for academia.

Our “customers” are students, educators, independent learners, and academic researchers.

Resources for Teaching and Learning



SOFTWARE

- SAS® Viya® for Learners
- SAS® Viya® Workbench for Learners



TRAINING

- e-Learning
- How-to videos
- Onsite & virtual training



EDUCATIONAL RESOURCES

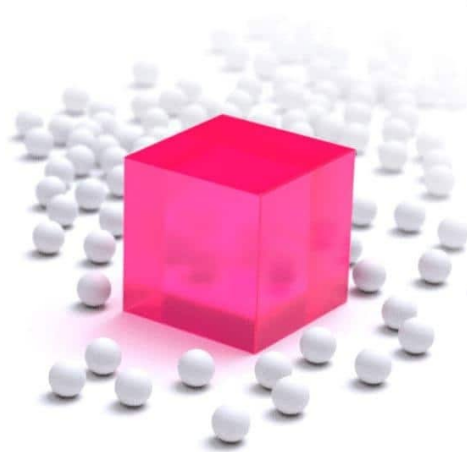
- Teaching materials
- Curriculum consulting
- Academic specializations
- SAS Educator Portal
- SAS Skill Builder for Students

SAS is the founder and future of analytics.

It all started with curious minds. Is there a better way to analyze data? How can we turn data into intelligence? Who will benefit from using our technology?

Our mission is to provide knowledge in the moments that matter. Making it easier and faster for more people to use powerful analytics shortens the path from data to insights and inspires bold new discoveries that drive progress. For five decades, SAS has done just that.

We envision a world where everyone can make better decisions, grounded in trusted data and assisted by the productivity and speed of SAS AI and analytics.



More about SAS

Five decades of innovation and profitability

Over 750 patents related to AI and analytics

Ranked No. 1 for Advanced and Predictive Analytics Market Share by IDC for the last 28 years*

A recognized leader in more than 25 vendor ranking reports in 2022

88 of the top 100 of the 2021 Fortune 500 list are SAS customers or their affiliates

2022 Microsoft Global Independent Software Vendor Partner of the Year

Recognized around the world for inclusive, meaningful culture and innovative technologies by organizations including Fast Company, Forbes, Human Rights Campaign, Disability:IN and more

The SAS® Viya® advantage

We empower customers to get more done with a faster, more productive AI and analytics platform. SAS Viya gives you the analytics you need, delivered on your terms, so you can innovate faster, collaborate regardless of skill set or API, and get results you can trust.

Use your own cloud, the SAS Cloud for hosted services, or one of the world's most broadly adopted cloud platforms.



Why learn SAS?



Analytics is key to solving today's business problems.

Organizations are often collecting data at a faster rate than they can handle and need people who can make sense of the data.



A career in analytics is a smart choice.

People with an analytical skill set are highly sought-after. By acquiring the analytical skills organizations are looking for, you will differentiate yourself.

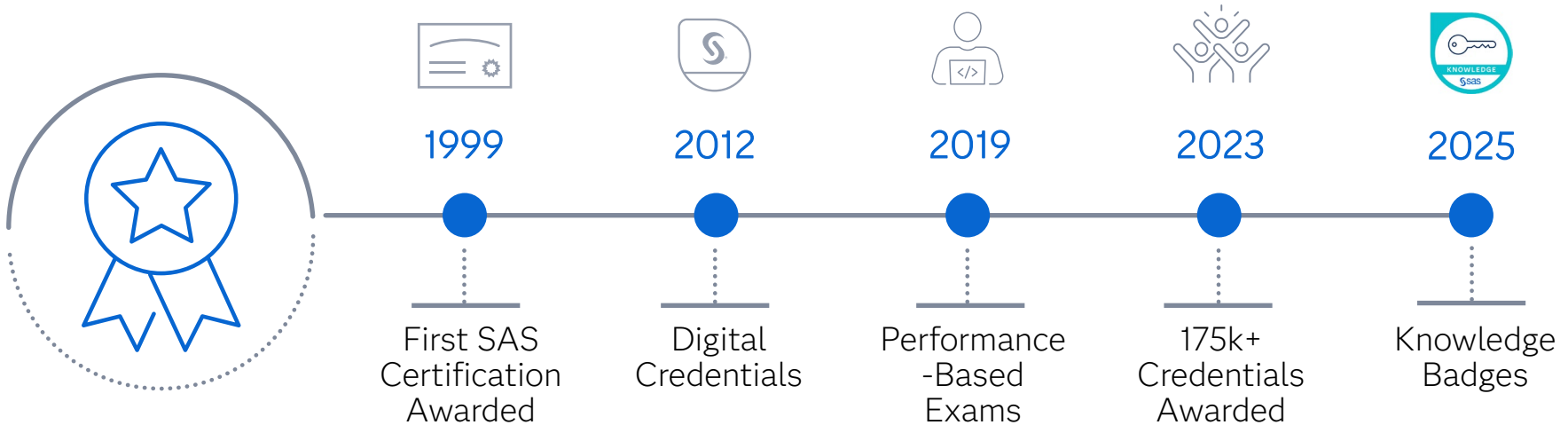


SAS can help boost your career.

Expand your career opportunities with SAS® skills and become an analytics expert. With SAS® certification a whole new world of opportunities will be open to you.

25+ Years of Career Value

2024 Marked 25 years for the SAS Certification Program



Demand for SAS Skills



Job postings seeking SAS skill: OCT 2024 - SEP 2025 (US)



89,250

Unique job postings



8,093

Competing employers



\$114.6K

Median salary

Why Get SAS Certified?

More Career Opportunities

Last year, 88.9% of job postings for statistical programmers requested SAS skills (Lightcast, 2025).

Higher Salaries

Statistical analysis jobs make \$19,000 more when SAS is listed as a skill in the job posting (Lightcast, 2025).

Competitive Edge

Adding a SAS certification to your resume signals expertise and credibility — helping you rise above the competition. In fact, 60% of IT managers are more likely to review a resume with a certification.

https://www.sas.com/en_us/certification/why-get-certified.html

SAS® Digital Badges



LEARN

Awarded to those who take and pass a training course from SAS, in most formats.



CHALLENGE

Awarded to those who compete in a SAS competition, such as the SAS-sponsored hackathons.



ACADEMIC

Awarded to college and university students and educators for completion of joint academic programs and initiatives.



KNOWLEDGE

Awarded to those who show knowledge and understanding of course materials.



CERTIFIED

Awarded to those who show proficiency by passing one or more SAS certification exams.

SAS® Knowledge Badges



SAS SQL Essentials Knowledge Badge

- demonstrate proficiency in using SAS SQL for data processing
- query, subset, summarize, and present data, as well as combine tables using joins and set operators
- create and modify tables and views
- generate macro variables with PROC SQL
- access DBMS data using SAS/ACCESS technology.



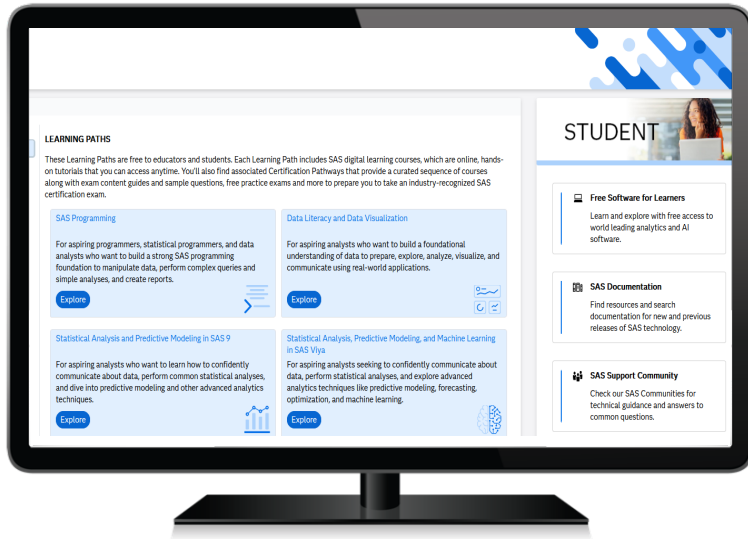
AI Foundations Knowledge Badge

- demonstrate foundational knowledge in AI
- focus on trustworthy and responsible practices
- identify unwanted biases and apply principles of responsible innovation
- understand Generative AI's capabilities and limitations
- leverage SAS tools to drive business value while addressing AI's risks and challenges.

Study

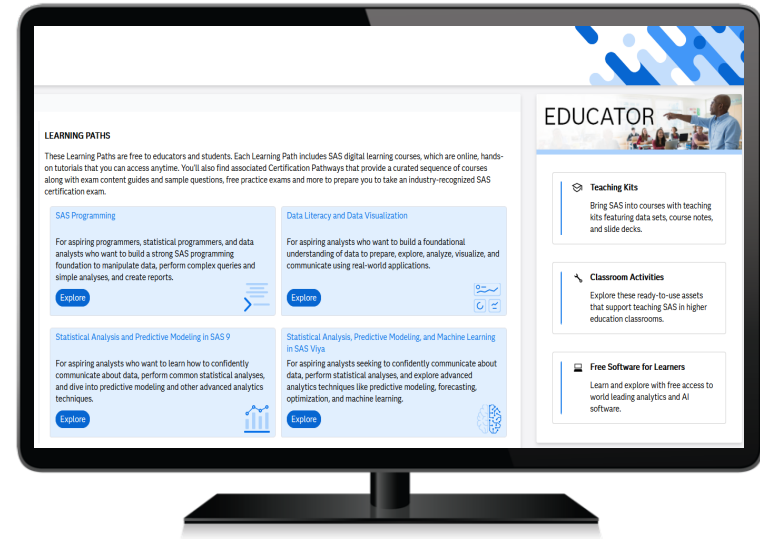
Free Learning Portals for Academics

SAS Skill Builder for Students



sas.com/skillbuilder

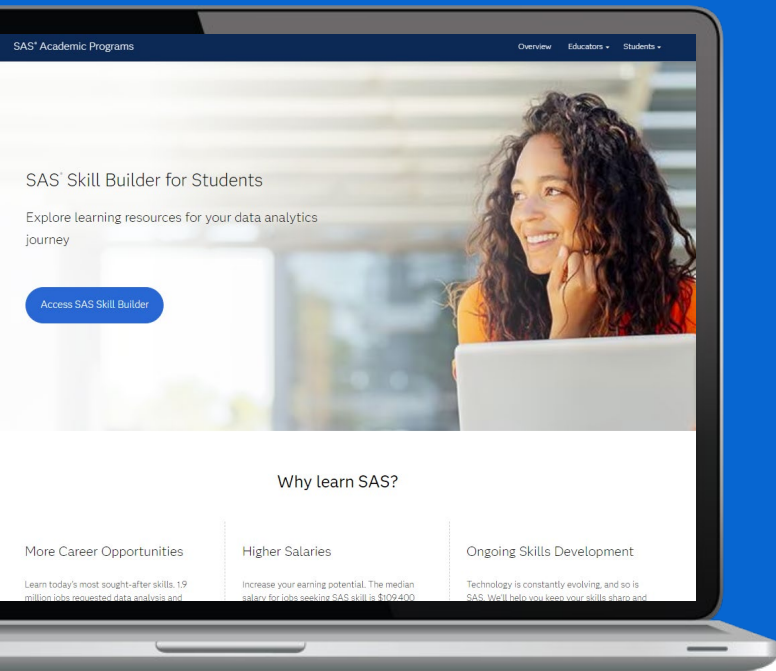
SAS Educator Portal



sas.com/educatorportal

SAS Skill Builder for Students

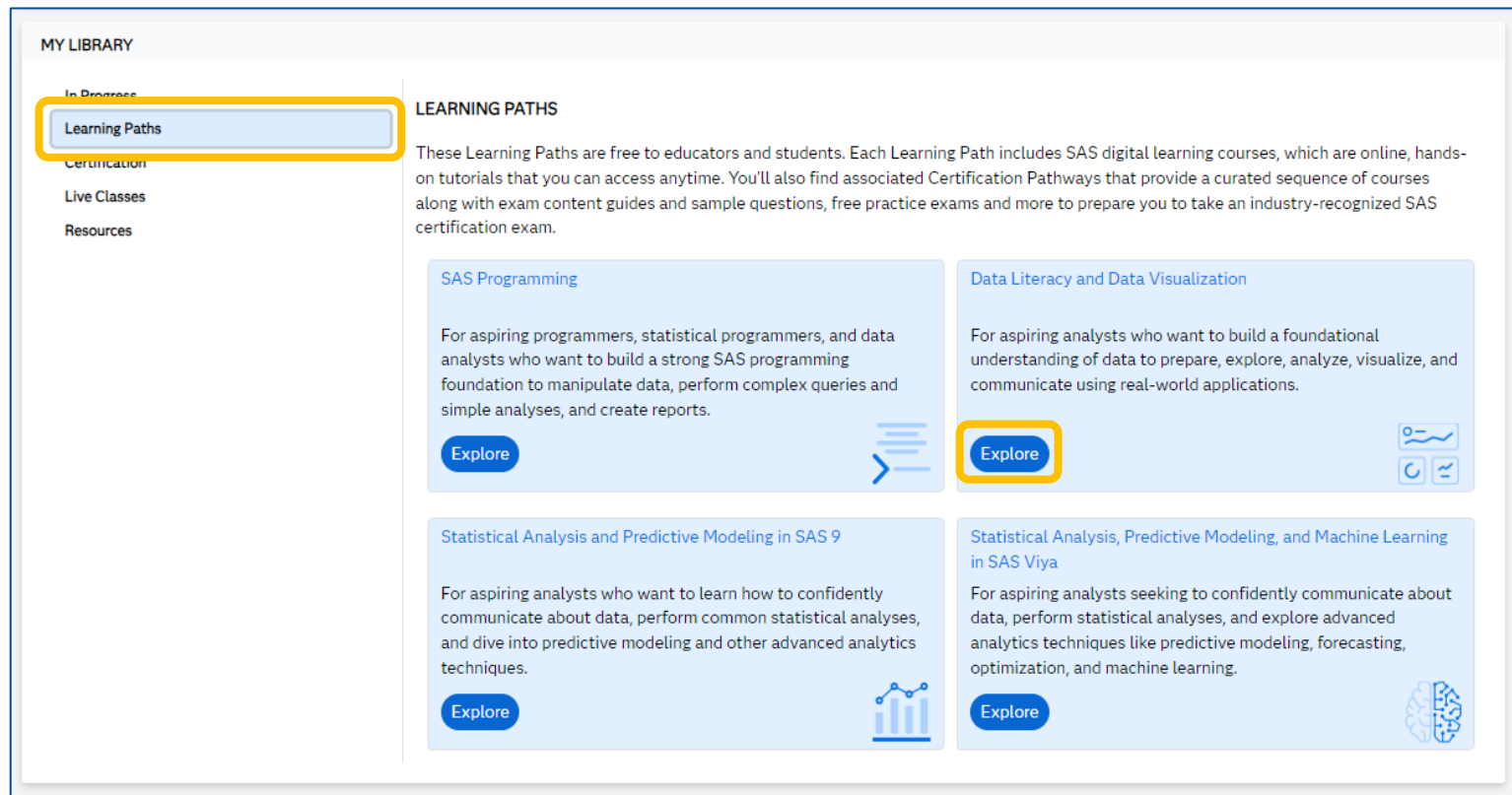
Your future starts here



- Learn on your time
 - Free e-learning courses
 - Certification prep materials and exam discounts
- Free software
 - Three cloud-based options
- Stay motivated!
 - Early career resources
 - Discover why data analytics is a rewarding career path
 - Learn about what it means to be a data analytics professional
 - Connect with employers
- Cross-industry access
 - Analytical skills for any discipline

www.sas.com/skillbuilder

Free e-Learning Courses



MY LIBRARY

- In Progress
- Learning Paths**
- Certification
- Live Classes
- Resources

LEARNING PATHS

These Learning Paths are free to educators and students. Each Learning Path includes SAS digital learning courses, which are online, hands-on tutorials that you can access anytime. You'll also find associated Certification Pathways that provide a curated sequence of courses along with exam content guides and sample questions, free practice exams and more to prepare you to take an industry-recognized SAS certification exam.

SAS Programming

For aspiring programmers, statistical programmers, and data analysts who want to build a strong SAS programming foundation to manipulate data, perform complex queries and simple analyses, and create reports.

[Explore](#)



Data Literacy and Data Visualization

For aspiring analysts who want to build a foundational understanding of data to prepare, explore, analyze, visualize, and communicate using real-world applications.

[Explore](#)



Statistical Analysis and Predictive Modeling in SAS 9

For aspiring analysts who want to learn how to confidently communicate about data, perform common statistical analyses, and dive into predictive modeling and other advanced analytics techniques.

[Explore](#)



Statistical Analysis, Predictive Modeling, and Machine Learning in SAS Viya

For aspiring analysts seeking to confidently communicate about data, perform statistical analyses, and explore advanced analytics techniques like predictive modeling, forecasting, optimization, and machine learning.

[Explore](#)



<https://learn.sas.com/my/>

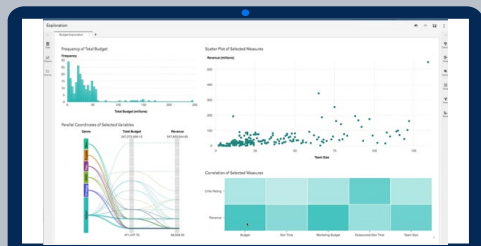
Practice

Software for Teaching and Learning

Free Academic Software

VFL

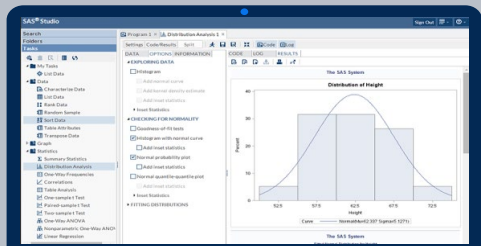
SAS® Viya® for Learners



www.sas.com/viyaforlearners

ODA

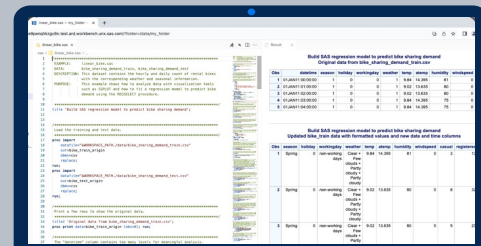
SAS® OnDemand for Academics



www.sas.com/ondemand

WFL

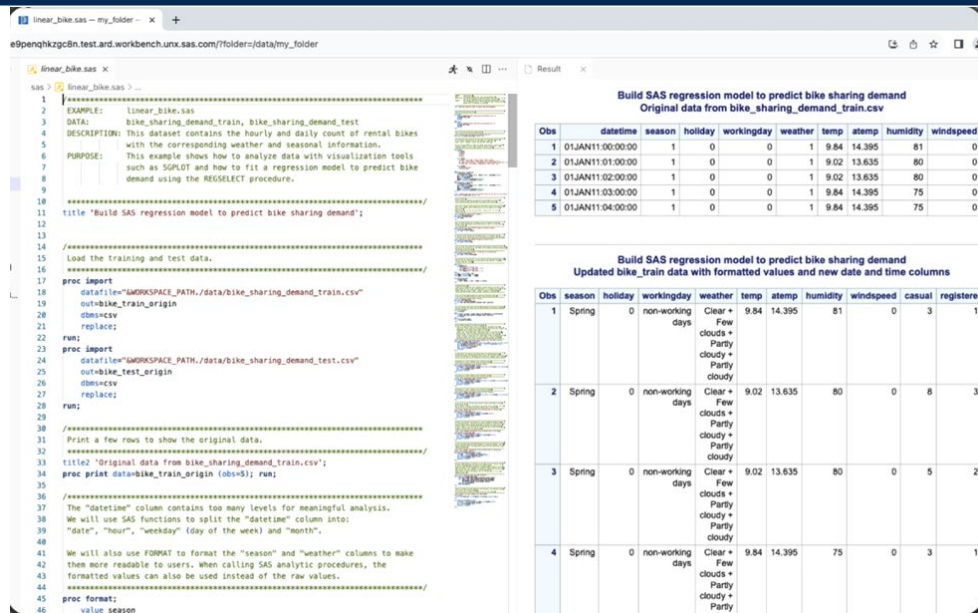
SAS® Viya® Workbench for Learners



www.sas.com/wfl

SAS Viya Workbench for Learners

Lower time to production and improves collaboration



The screenshot displays the SAS Viya Workbench interface. On the left, a SAS script is visible, titled 'linear_bike.sas'. The script includes comments describing the data (bike sharing demand), the purpose (predicting demand using the REGSELECT procedure), and the steps to load and format the data. The script uses PROC IMPORT to load data from CSV files and PROC FORMAT to format the 'season' and 'weather' variables. On the right, the results of the script are shown. The first table, titled 'Build SAS regression model to predict bike sharing demand Original data from bike_sharing_demand_train.csv', displays the first five rows of the original data. The second table, titled 'Build SAS regression model to predict bike sharing demand Updated bike_train data with formatted values and new date and time columns', displays the first four rows of the updated data, showing formatted values for 'season', 'holiday', 'workingday', 'weather', 'temp', 'atemp', 'humidity', 'windspeed', 'casual', and 'registered'.

```
1 *****  
2 EXAMPLE: linear_bike.sas  
3 DATA: bike_sharing_demand_train, bike_sharing_demand_test  
4 DESCRIPTION: This dataset contains the hourly and daily count of rental bikes  
5 with the corresponding weather and seasonal information.  
6 PURPOSE: This example shows how to analyze data with visualization tools  
7 such as SGPLOT and how to fit a regression model to predict bike  
8 demand using the REGSELECT procedure.  
9  
10 *****  
11 title 'Build SAS regression model to predict bike sharing demand';  
12  
13  
14 *****  
15 Load the training and test data.  
16  
17 *****  
18 proc import  
19   datafile='\\WORKSPACE_PATH\data\bike_sharing_demand_train.csv'  
20   out=bike_train_origin  
21   dbms=csv  
22   replace;  
23 run;  
24  
25 proc import  
26   datafile='\\WORKSPACE_PATH\data\bike_sharing_demand_test.csv'  
27   out=bike_test_origin  
28   dbms=csv  
29   replace;  
30 run;  
31  
32 *****  
33 Print a few rows to show the original data.  
34  
35 *****  
36 title2 'Original data from bike_sharing_demand_train.csv';  
37 proc print data=bike_train_origin (obs=5); run;  
38  
39 *****  
40 The "datetime" column contains too many levels for meaningful analysis.  
41 We will use SAS functions to split the "datetime" column into:  
42 "date", "hour", "weekday" (day of the week) and "month".  
43  
44 *****  
45 We will also use FORMAT to format the "season" and "weather" columns to make  
46 then more readable to users. When calling SAS analytic procedures, the  
47 formatted values can also be used instead of the raw values.  
48  
49 *****  
50 proc format;  
51   value season  
52     1 = 'Spring'  
53     2 = 'Summer'  
54     3 = 'Autumn'  
55     4 = 'Winter';  
56  
57   value weather  
58     1 = 'Clear + Few clouds'  
59     2 = 'Partly cloudy'  
60     3 = 'Partly cloudy'  
61     4 = 'Partly cloudy';  
62  
63 run;  
64  
65 *****
```

Obs	datetime	season	holiday	workingday	weather	temp	atemp	humidity	windspeed
1	01JAN11:00:00:00	1	0	0	1	9.84	14.395	81	0
2	01JAN11:01:00:00	1	0	0	1	9.02	13.635	80	0
3	01JAN11:02:00:00	1	0	0	1	9.02	13.635	80	0
4	01JAN11:03:00:00	1	0	0	1	9.84	14.395	75	0
5	01JAN11:04:00:00	1	0	0	1	9.84	14.395	75	0

Obs	season	holiday	workingday	weather	temp	atemp	humidity	windspeed	casual	registered
1	Spring	0	non-working days	Clear + Few clouds + Partly cloudy + Partly cloudy	9.84	14.395	81	0	3	11
2	Spring	0	non-working days	Clear + Few clouds + Partly cloudy + Partly cloudy	9.02	13.635	80	0	8	31
3	Spring	0	non-working days	Clear + Few clouds + Partly cloudy + Partly cloudy	9.02	13.635	80	0	5	21
4	Spring	0	non-working days	Clear + Few clouds + Partly cloudy + Partly cloudy	9.84	14.395	75	0	3	11

- Code from scratch.
- Use existing projects or code from SAS Viya or SAS 9.
- Familiar interfaces.
- Update and back up as needed.

SAS Viya Workbench for Learners

Purpose-built for
developers and modelers

Empower students and educators with free, flexible, and versatile analytics to build programming skills, develop models, and complete projects fast.



Get more time and space for learning, teaching, and problem-solving



Enjoy flexibility and boost productivity by working in the coding language that fits your needs



Prepare for success in a multi-tool world



SAS Viya Workbench for Learners

Getting Started



<https://www.youtube.com/watch?v=SY86esPrJtw>

Succeed!

SAS SQL Essentials Knowledge Badge

SAS KNOWLEDGE BADGE

SAS SQL Essentials Knowledge Badge

About this Knowledge Badge

Everything you need to know.

To earn the SAS® SQL Essentials Knowledge Badge, you must pass an open-book multiple-choice assessment covering how to process SAS data using Structured Query Language (SQL).

You will demonstrate knowledge of querying and subsetting data, summarizing and presenting data, and combining tables using joins and set operators. You will also display your knowledge of SQL to create and modify tables and views, to create macro variables with PROC SQL, and to access DBMS data with SAS/ACCESS technology.

This badge is intended for programmers and business analysts using the SAS SQL procedure.

Get started by reviewing the assessment content:

[Assessment Content Guide](#)

How to Prepare

Review the content in the course below.

Training Courses

COURSE
SAS® SQL 1: Essentials

SAS Knowledge Badge

SAS knowledge badges are globally recognized and indicate the acquisition of domain-specific knowledge.



Why earn a SAS Knowledge Badge?

- Show that you've developed specialized SAS skills through practical learning and application.
- Knowledge badges can be milestones on a pathway to Certifications or complement certifications already on your resume.
- Build job-ready skills through targeted courses designed to kick-start your career in a fast-growing field.
- Demonstrate your expertise in high-demand areas to stay competitive and aligned with your career goals.

<https://learn.sas.com/course/view.php?id=8219>

AI Foundations Knowledge Badge

SAS KNOWLEDGE BADGE

AI Foundations Knowledge Badge

About this Knowledge Badge

Everything you need to know.

To earn the AI Foundations Knowledge Badge, you must pass an open-book multiple-choice assessment covering the importance of trustworthy and responsible practices in AI, analytics, and innovation.

You will display foundational knowledge and skills to consider issues related to responsible innovation and trustworthy AI, including identifying unwanted biases, applying principles of responsible innovation, and understanding how SAS technologies address these issues. You will show your understanding of the foundational knowledge of Generative AI and its capabilities, limitations, applications and how SAS tools can be leveraged to drive business value while addressing the risks and challenges of this transformative technology.

The badge is intended for individuals using, designing, and monitoring AI systems.

Get started by reviewing the assessment content:

[Assessment Content Guide](#)

How to Prepare

Review the content in the courses below.

Training Courses

COURSE

<https://learn.sas.com/course/view.php?id=8216>

SAS Knowledge Badge

SAS knowledge badges are globally recognized and indicate the acquisition of domain-specific knowledge.



Why earn a SAS Knowledge Badge?

- Show that you've developed specialized SAS skills through practical learning and application.
- Knowledge badges can be milestones on a pathway to Certifications or complement certifications already on your resume.
- Build job-ready skills through targeted courses designed to kick-start your career in a fast-growing field.
- Demonstrate your expertise in high-demand areas to stay competitive and aligned with your career goals.

Preparing For the Assessment

Content Guide

• Use the BY statement to specify the variable(s) whose values are used to sort the data.	
Us	• Use the Q (Q) statement
•	
Expl	
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SAS 9.4 Programming Fundamentals Exam

Fundamental SAS Concepts

Recall general rules of DATA and PROC steps.

Recognize general rules of SAS statements including global statements.

Interpret the SAS log.

Distinguish between syntax and logic errors.

- Recall SAS syntax rules.
- Recognize different types of syntax errors and be able to resolve common problems.
- Recall use of the PUTLOG statement to troubleshoot logic errors.

Explore SAS Data Sets

Recall naming conventions used for SAS data sets and variables.

Recognize variable types (character and numeric).

Explain how to create and manipulate SAS date values.

- Explain how SAS stores date values.
- Recall how to use SAS date formats to specify how the values are displayed.

Recognize how SAS stores missing data.

Use the LIBNAME statement to read SAS data sets.

Use PROC CONTENTS to view the descriptor portion of a data set.

Recall how to use Data Set options: DROP=, KEEP=, RENAME=, OBS=.

Using the DATA Step to Access SAS Data Sets

Use the DATA statement to create one or multiple data sets.

Use the SET statement to read a data set.

Explain how to combine data sets.

- Use MERGE and BY statements to combine multiple data sets horizontally.

Detailed
breakdown and
information about
each objective on
an exam.

Sample Assessment

During

QUIZ NAVIGATION

☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
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[Finish attempt](#)

Question 1

Not yet answered

Points out of 1.00

 Flag question

What are the two types of steps?

Select one:

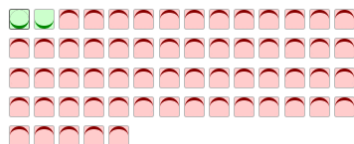
- ☐ a. CHARACTER and NUMERIC
- ☐ b. DATA and DESCRIPTOR
- ☐ c. RUN and QUIT
- ☐ d. DATA and PROC

[Next page](#)

Sample Assessment

After

QUIZ NAVIGATION



[Show all questions on one page](#)

[Finish review](#)

Started on	Monday, March 11, 2024, 2:04 PM
State	Finished
Completed on	Monday, March 11, 2024, 2:05 PM
Time taken	1 min 5 secs
Grade	2.00 out of 61.00 (3.28%)

Question 1

Correct

1.00 points out of 1.00



Flag question

What are the two types of steps?

Select one:

- ☐ a. DATA and DESCRIPTOR
- ☐ b. RUN and QUIT
- ☐ c. CHARACTER and NUMERIC
- ☒ d. DATA and PROC ✓

The two types of SAS steps are DATA and PROC. Character and numeric are the two SAS data types, RUN and QUIT are the two explicit step boundaries and the two parts of a data set include the DATA and DESCRIPTOR portions.

The correct answer is: DATA and PROC

SAS Communities

www.sas.com/communities

Get SAS tips, share your knowledge, and find out about upcoming events.

Global community of users for 24/7 support.

Case studies, documents, blogs, webinars, and more.

SAS Communities gives you **immediate access** to **thousands of SAS users** across the globe.

From learners to data professionals, the platform provides valuable connections and insights into **real world problems** and **processes**.

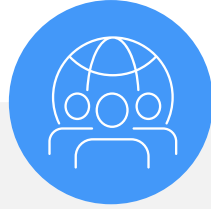
There is no data problem too obscure!

Helpful Resources



[Ask the Expert](#)

View webinars that provide insights into using SAS products.



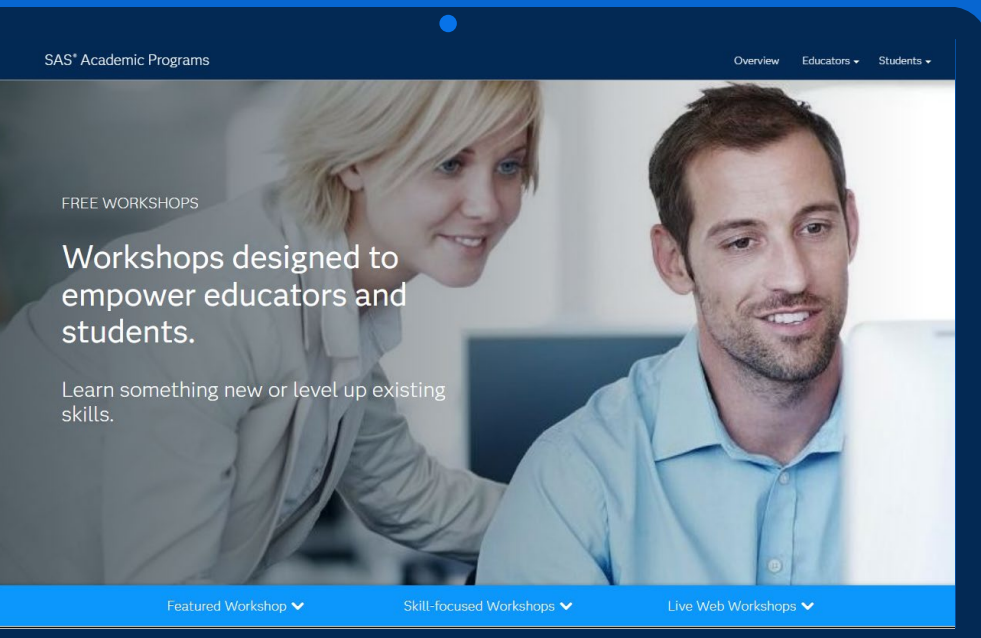
[SAS Support Communities](#)

Ask questions, get answers and share insights with SAS users.



[SAS Users YouTube Channel](#)

A plethora of videos on hundreds of topics, just for SAS users.



Free Academic Workshops

- Wide variety of topics throughout the year including our Project-Based Learner Series
- Certification Guided Prep
- Live web options with SAS instructors

www.sas.com/academicworkshops

Register for Resources

Create a SAS profile with your academic email address: <https://www.sas.com/profile/ui/#/create>

SAS Skill Builder for Students Portal: www.sas.com/skillbuilder

SAS Viya Workbench for Learners Software: www.sas.com/wfl





THANK YOU!

we are
sas

www.sas.com

