

# 107 SolidWorks interview questions to hire top engineers

## Questions

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1. What's the first thing you do when starting a new SolidWorks project?
2. Can you explain the difference between a part, an assembly, and a drawing in SolidWorks?
3. Describe the process of creating a simple extruded boss/base feature.
4. How would you create a hole in a solid body?
5. What are some common file types used in SolidWorks?
6. Explain how you would apply a material to a part.
7. What's the purpose of using relations and dimensions in sketches?
8. Describe how you would create a fillet or a chamfer on an edge.
9. How do you create a pattern of features in SolidWorks?
10. What is the feature manager design tree, and why is it important?
11. Explain how to create a revolved feature.
12. What is a sketch plane, and how do you choose one?
13. Describe the steps involved in creating a simple assembly.
14. How do you add mates between components in an assembly?
15. What's the difference between a fixed and a floating component in an assembly?
16. Explain how to create a drawing from a part or assembly.
17. How do you add dimensions and annotations to a drawing?
18. What is a BOM, and how is it used?
19. How do you change the units of measurement in SolidWorks?
20. What is the purpose of configurations in SolidWorks?
21. Explain how to use the measure tool.
22. Describe how you would create a lofted feature.
23. What are some common sketching tools, and how are they used?
24. Explain the difference between surface modeling and solid modeling.
25. How do you check for interferences in an assembly?
26. What is the purpose of design tables?
27. Describe how to use the shell feature.
28. How do you create a swept feature?
29. What is the Center of Mass and how do you calculate it in Solidworks?
30. Describe your experience with creating and using design tables in SolidWorks.
31. Explain the difference between a sketch-driven pattern and a feature-driven pattern.
32. How would you approach modeling a complex curved surface in SolidWorks?
33. What are the advantages and disadvantages of using configurations in SolidWorks?
34. How do you manage revisions and versions of SolidWorks parts and assemblies?
35. Explain the purpose and use of equations in SolidWorks.
36. Describe your experience with sheet metal design in SolidWorks.
37. What is the difference between surface modeling and solid modeling in SolidWorks?
38. How do you create and use custom weldment profiles in SolidWorks?
39. Explain how you would simulate a simple mechanism using SolidWorks Motion.
40. Describe your experience with importing and exporting different file formats in SolidWorks.
41. How do you troubleshoot common errors when creating features in SolidWorks?
42. Explain the purpose and use of library features in SolidWorks.
43. Describe your experience with creating and using custom properties in SolidWorks.
44. How would you optimize a SolidWorks assembly for performance?
45. Explain the difference between a local and a global variable in SolidWorks equations.
46. Describe your experience with creating and using SolidWorks macros.
47. How do you handle large assembly performance issues in SolidWorks?
48. Explain the purpose and use of SolidWorks Routing.
49. Describe your experience with using SolidWorks Simulation for basic stress analysis.
50. How would you create a family of parts with different dimensions using SolidWorks?
51. Explain the difference between a derived part and a mirrored part in SolidWorks.
52. Describe how you would use SolidWorks to create a mold for a plastic part.
53. How do you create and manage Bills of Materials (BOMs) in SolidWorks assemblies?
54. Explain the difference between surfacing and solid modeling in SolidWorks, and when would you choose one over the other?
55. How would you approach designing a complex curved surface in SolidWorks, ensuring it meets specific aesthetic and functional requirements?
56. Describe your experience with using equations and global variables to drive design changes in SolidWorks models. Can you give a practical example?
57. What are the advantages and disadvantages of using configurations in SolidWorks, and how can they be effectively managed in large assemblies?
58. Explain the concept of design tables in SolidWorks and how they can be used to create a family of parts.
59. How would you optimize a SolidWorks assembly for performance, considering factors such as file size, complexity, and hardware limitations?
60. Describe your experience with using SolidWorks Simulation for FEA analysis. What types of studies have you performed, and what were the key findings?
61. How would you set up a SolidWorks Simulation study to analyze the thermal stress in a component?
62. Explain how you would use SolidWorks Flow Simulation to analyze the fluid flow around an object.
63. Describe your experience with using SolidWorks PDM (Product Data Management) or other PDM systems. How does it improve collaboration and data management?
64. How would you manage revisions and versions of SolidWorks files using a PDM system?
65. Explain your understanding of Geometric Dimensioning and Tolerancing (GD&T) and how it is applied in SolidWorks drawings.
66. How would you create a detailed drawing in SolidWorks that accurately conveys manufacturing requirements, including GD&T?
67. Describe your experience with creating custom features or macros in SolidWorks using SolidWorks API. What problems did you solve?
68. How would you automate a repetitive task in SolidWorks using a macro or API script?
69. Explain your understanding of SolidWorks Weldments and how they are used to design welded structures.
70. How would you create a bill of materials (BOM) in SolidWorks and customize it to include specific information?
71. Describe your experience with importing and exporting files between SolidWorks and other CAD/CAM software. What challenges did you face and how did you overcome them?
72. Explain how you would reverse engineer a physical part using SolidWorks, given its dimensions and material properties.
73. How would you use SolidWorks to design a mold for plastic injection molding?
74. Describe your experience with using SolidWorks Routing for designing piping or electrical harnesses.
75. How do you handle large assembly performance issues, specifically related to graphics and rebuild times?
76. What are some best practices for organizing SolidWorks files and folders to ensure efficient collaboration and data management?
77. Explain the difference between a loft and a sweep feature, and provide examples of when each would be appropriate.
78. Describe a complex surface you've modeled in SolidWorks and the challenges you faced.
79. How would you optimize a large SolidWorks assembly for performance?
80. Explain your approach to creating parametric designs in SolidWorks.
81. Discuss your experience with SolidWorks API and custom macros.
82. What are the advantages and disadvantages of using top-down versus bottom-up design methodologies in SolidWorks?
83. How do you handle design changes in a complex SolidWorks project?
84. Describe your experience with SolidWorks Simulation and FEA analysis.
85. How would you create a sheet metal part with multiple bends and complex features in SolidWorks?
86. Explain your understanding of geometric dimensioning and tolerancing (GD&T) and how you apply it in SolidWorks.
87. What strategies do you use for managing configurations and design variations in SolidWorks?
88. How do you ensure data integrity and prevent errors when collaborating with multiple users on a SolidWorks project?
89. Describe a time you had to troubleshoot a complex SolidWorks problem and how you resolved it.
90. What is your experience with SolidWorks PDM or other product data management systems?
91. How do you approach reverse engineering a physical part using SolidWorks?
92. Explain your knowledge of different file formats supported by SolidWorks and their appropriate uses.
93. Describe your experience with creating and managing SolidWorks templates.
94. How would you model a part with complex draft angles and undercuts in SolidWorks?
95. What are your preferred methods for creating and managing library features in SolidWorks?
96. How do you handle imported geometry from other CAD systems in SolidWorks?
97. Explain your understanding of SolidWorks equations and global variables.
98. Describe your experience with creating photorealistic renderings in SolidWorks.
99. How would you model a cam and follower mechanism in SolidWorks?
100. What are the best practices for creating and managing custom materials in SolidWorks?
101. How do you ensure that your SolidWorks models meet specific manufacturing requirements?
102. Describe your experience with using SolidWorks routing for piping or electrical harnesses.
103. How do you approach designing parts for additive manufacturing (3D printing) in SolidWorks?
104. What strategies do you use for creating and managing weldments in SolidWorks?
105. How do you handle the creation of exploded views and bills of materials in SolidWorks?