

Black Box Testing
GROUP 34



Lab-Technician
Profile Page

Constraints

Qualifications

1. Only alphabetic characters and commas are allowed.
2. Ensure no duplicate qualifications.
3. Maximum length is 250 characters.

Associated Lab

1. Must not be empty.
2. Must be a string
3. Should match the name of a registered lab.
4. Maximum length is 100 characters.

Specialization

1. Only alphabetic characters and commas are allowed.
2. At least one specialization must be provided.
3. No duplicate entries.
4. Maximum length is 200 characters.

Years Of Experience

1. Must be a non-negative integer.
2. Maximum value should be less than or equal to 50.

Certifications

1. Only alphabetic characters and commas are allowed.
2. Ensure no duplicate certifications.
3. At least one certification must be provided.
4. Maximum length is 200 characters.

Contact Number

1. Must follow a valid phone number format
2. Maximum length of 13 characters.

Address

1. Street:
 - Must not be empty.
 - Maximum length of 100 characters.
2. City:
 - Must not be empty.
 - Maximum length of 50 characters.
3. State:
 - Must not be empty.
 - Maximum length of 50 characters.
4. Postal code:
 - Must not be empty
 - Must be in a valid postal code format (e.g., Indian Postal code of 6 digits only)
 - Maximum length of 10 characters
5. Country:
 - Must not be empty.
 - Must be a valid country name.
 - Maximum length of 50 characters.

Equivalence Classes:

Qualifications Equivalence Classes

1. Q1: Non-empty string with alphabetic characters and commas only.
2. Q2: String containing invalid characters.
3. Q3: Empty string.
4. Q4: String with unique qualifications
5. Q5: String with duplicate qualifications
6. Q6: String exceeding max length

Associated Lab Equivalence Classes

1. AL1: Valid lab name within character limits.
2. AL2: Empty string.
3. AL3: Lab name exceeding the max character limit.
4. AL4: Lab name does not match with the name of a registered lab.
5. AL5: Lab name matches with the name of a registered lab.

Specialization Equivalence Classes

1. SP1: Non-empty string with alphabetic characters and commas only
2. SP2: Empty string.
3. SP3: String with unique specializations.
4. SP4: String with duplicate specializations.
5. SP5: String containing invalid characters.
6. SP6: String exceeding max length.

Years Of Experience Equivalence Classes

1. YE1: Non-negative integer within the valid range.
2. YE2: Negative integer.
3. YE3: Non-integer values.
4. YE4: Integer greater than the max limit.
5. YE5: Empty value.

Certifications Equivalence Classes

1. CR1: Non-empty string with alphabetic characters and commas only.
2. CR2: Empty string.
3. CR3: String containing invalid characters
4. CR4: String with unique certifications.
5. CR5: String with duplicate certifications.
6. CR6: String exceeding max length.

Contact Number Equivalence Classes

1. CN1: Starts with +91 and is exactly 10 digits
2. CN2: Missing "+91"
3. CN3: Contains non-numeric characters
4. CN4: Fewer or more than 10 digits after +91
5. CN5: Empty string.

Address Equivalence Classes

1. Street:
 - S1: Non-empty string
 - S2: Empty string
 - S3: Exceeds 100 characters
2. City:
 - CT1: Non-empty string
 - CT2: Empty string
 - CT3: Exceeds 50 characters
3. State:
 - ST1: Full name state
 - ST2: Empty string
 - ST3: Exceeds 50 characters
4. Postal Code:
 - PC1: Non-empty string with valid format
 - PC2: Empty string
 - PC3: Invalid format of the postal code
 - PC4: Exceeds 10 characters
5. Country:
 - C1: Non-empty string with a valid country name
 - C2: Empty string
 - C3: Exceeds 50 characters

Test Cases :

Test Case ID	Input	Equivalence Class	Expected Result
TC1	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q1, Q4, AL1, AL5, SP1, SP3, YE1, CR1, CR4, CN1, S1, CT1, ST1, PC1, C1	Accepted
TC2	Qualifications: "B.Sc@, M.Sc#" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q2, AL1, SP1, YE1, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: Invalid characters in Qualification field
TC3	Qualifications: "" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10	Q3, AL1, SP1, YE1, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: Empty string in Qualifications field.

	Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"		
TC4	Qualifications: "B.Sc, B.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q5, AL1, SP1, YE1, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: String with duplicate qualifications.

TC5	Qualifications: "B.Sc, M.Sc, PhD, Doctorate, Fellowship, Masters in Science, Specialist in Microbiology, Pathologist, etc." Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q6, AL1, SP1, YE1, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: Exceed maximum length limit in Qualification filed.
TC6	Qualifications: "B.Sc, PhD" Associated Lab: "" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q1, AL2, SP1, YE1, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: Empty string in Associated Lab field
TC7	Qualifications: "B.Sc, PhD" Associated Lab: "Central Lab"*50 Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543210"	Q1, AL3, SP1, YE1, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: Exceed maximum length limit in Associated Lab field

	Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"		
TC8	Qualifications: "B.Sc, PhD" Associated Lab: "Precision Labs." Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q1, AL4, SP1, YE1, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: Lab name does not match with the name of a registered lab.
TC9	Qualifications: "B.Sc, PhD" Associated Lab: "LabQuest" Specialization: "" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q1, AL1, SP2, YE1, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: Empty string in Specialization field
TC10	Qualifications: "B.Sc, PhD" Associated Lab: "LabQuest" Specialization: "Pathology, Pathology" Years Of Experience: 10	Q1, AL1, SP4, YE1, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: Duplicate strings in Specialization field

	Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"		
TC11	Qualifications: "B.Sc, PhD" Associated Lab: "LabQuest" Specialization: "Pathology, Hematology%86" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q1, AL1, SP5, YE1, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: String contains invalid characters in Specialization field
TC12	Qualifications: "B.Sc, PhD" Associated Lab: "" Specialization: "Pathology, Hematology, Microbiology, Biochemistry, Molecular Biology, etc."*5 Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q1, AL1, SP6, YE1, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: Specialization field exceeds maximum characters limit.

TC13	Qualifications: "B.Sc, PhD" Associated Lab: "Delta Laboratory" Specialization: "Pathology, Hematology" Years Of Experience: -5 Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q1, AL1, SP1, YE2, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: Negative integer value in Years Of Experience field
TC14	Qualifications: "B.Sc, PhD" Associated Lab: "Delta Laboratory" Specialization: "Pathology, Hematology" Years Of Experience: 3.5 Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q1, AL1, SP1, YE3, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: Non-integer values in Years Of Experience field.
TC15	Qualifications: "B.Sc, PhD" Associated Lab: "LabQuest" Specialization: "Pathology, Hematology" Years Of Experience: 55 Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road"	Q1, AL1, SP1, YE4, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: Exceeds valid range in Years Of Experience field.

	City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"		
TC16	Qualifications: "B.Sc, PhD" Associated Lab: "LabQuest" Specialization: "Pathology, Hematology" Years Of Experience: Certifications: "ISO9001, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q1, AL1, SP1, YE5, CR1, CN1, S1, CT1, ST1, PC1, C1	Rejected: Empty value in Years Of Experience field.
TC17	Qualifications: "B.Sc, PhD" Associated Lab: "LabQuest" Specialization: "Pathology, Hematology" Years Of Experience: 15 Certifications: "" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q1, AL1, SP1, YE1, CR2, CN1, S1, CT1, ST1, PC1, C1	Rejected: Empty string in Certifications field.

TC18	Qualifications: "B.Sc, PhD" Associated Lab: "LabQuest" Specialization: "Pathology, Hematology" Years Of Experience: 15 Certifications: "ISO9001@, NA\$BL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q1, AL1, SP1, YE1, CR3, CN1, S1, CT1, ST1, PC1, C1	Rejected: Invalid characters in Certifications field.
TC19	Qualifications: "B.Sc, PhD" Associated Lab: "LabQuest" Specialization: "Pathology, Hematology" Years Of Experience: 14 Certifications: "NABL, NABL" Contact Number: "+919876543210" Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"	Q1, AL1, SP1, YE1, CR5, CN1, S1, CT1, ST1, PC1, C1	Rejected: Duplicate strings in Certifications field.
TC20	Qualifications: "B.Sc, PhD" Associated Lab: "LabQuest" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, OSHA, NABL, Fellowship, Specialist in Lab Management, Certified Technologist"*5 Contact Number:	Q1, AL1, SP1, YE1, CR6, CN1, S1, CT1, ST1, PC1, C1	Rejected: Exceeds maximum length limit in Certifications filed.

	Address: Street: "5 MG Road" City: "Mumbai" State: "Maharashtra" Postal Code: "400001" Country: "India"		
TC21	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+91987654218" Address: Street: "12 MG Road" City: "Kolkata" State: "West Bengal" Postal Code: "700001" Country: "India"	Q1, AL1, SP1, YE1, CR1, CN4, S1, CT1, ST1, PC1, C1	Rejected: Incorrect number of digits.
TC22	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "987654218" Address: Street: "12 MG Road" City: "Kolkata" State: "West Bengal" Postal Code: "700001" Country: "India"	Q1, AL1, SP1, YE1, CR1, CN2, S1, CT1, ST1, PC1, C1	Rejected: Missing "+91"
TC23	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10	Q1, AL1, SP1, YE1, CR1, CN3, S1, CT1, ST1, PC1, C1	Rejected: Contains non-numeric characters

	Certifications: "ISO9001, NABL" Contact Number: "+9198@654/18" Address: Street: "12 MG Road" City: "Kolkata" State: "West Bengal" Postal Code: "700001" Country: "India"		
TC24	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "" Address: Street: "12 MG Road" City: "Kolkata" State: "West Bengal" Postal Code: "700001" Country: "India"	Q1, AL1, SP1, YE1, CR1, CN5, S1, CT1, ST1, PC1, C1	Rejected: Empty string in Contact Number field.
TC25	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543220" Address: Street: "" City: "Hyderabad" State: "Telangana" Postal Code: "500001" Country: "India"	Q1, AL1, SP1, YE1, CR1, CN1, S2, CT1, ST1, PC1, C1	Rejected: Street cannot be empty
TC26	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology,	Q1, AL1, SP1, YE1, CR1, CN1, S3, CT1, ST1,	Rejected: Exceeds 100 characters

	Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543220" Address: Street: "Ahail"*25 City: "Hyderabad" State: "Telangana" Postal Code: "500001" Country: "India"	PC1, C1	
TC27	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543220" Address: Street: "14 Jubilee Hills Road" City: "" State: "Telangana" Postal Code: "500001" Country: "India"	Q1, AL1, SP1, YE1,CR1, CN1, S1, CT2, ST1, PC1, C1	Rejected: City cannot be empty
TC28	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543220" Address: Street: "14 Jubilee Hills Road" City: "Hyd"*25 State: "Telangana" Postal Code: "500001" Country: "India"	Q1, AL1, SP1, YE1,CR1, CN1, S1, CT3, ST1, PC1, C1	Rejected: Exceeds 50 characters

TC29	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543220" Address: Street: "14 Jubilee Hills Road" City: "Hyderabad" State: "" Postal Code: "500001" Country: "India"	Q1, AL1, SP1, YE1, CR1, CN1, S1, CT1, ST2, PC1, C1	Rejected: State cannot be empty
TC30	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543220" Address: Street: "14 Jubilee Hills Road" City: "Hyderabad" State: "Tel"*25 Postal Code: "500001" Country: "India"	Q1, AL1, SP1, YE1, CR1, CN1, S1, CT1, ST3, PC1, C1	Rejected: Exceeds 50 characters
TC31	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543220" Address: Street: "14 Jubilee Hills Road"	Q1, AL1, SP1, YE1, CR1, CN1, S1, CT1, ST1, PC2, C1	Rejected: Postal code cannot be empty

	City: "Hyderabad" State: "Telangana" Postal Code: "" Country: "India"		
TC32	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543220" Address: Street: "14 Jubilee Hills Road" City: "Hyderabad" State: "Telangana" Postal Code: "50A01Z" Country: "India"	Q1, AL1, SP1, YE1, CR1, CN1, S1, CT1, ST1, PC3, C1	Rejected: Invalid format
TC33	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543220" Address: Street: "14 Jubilee Hills Road" City: "Hyderabad" State: "Telangana" Postal Code: "50000156372" Country: "India"	Q1, AL1, SP1, YE1, CR1, CN1, S1, CT1, ST1, PC4, C1	Rejected: Exceeds 10 digits
TC34	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10	Q1, AL1, SP1, YE1, CR1, CN1, S1, CT1, ST1, PC1, C2	Rejected: Country cannot be empty

	Certifications: "ISO9001, NABL" Contact Number: "+919876543220" Address: Street: "14 Jubilee Hills Road" City: "Hyderabad" State: "Telangana" Postal Code: "500001" Country: ""		
TC35	Qualifications: "B.Sc, M.Sc" Associated Lab: "Central Lab" Specialization: "Pathology, Hematology" Years Of Experience: 10 Certifications: "ISO9001, NABL" Contact Number: "+919876543220" Address: Street: "14 Jubilee Hills Road" City: "Hyderabad" State: "Telangana" Postal Code: "500001" Country: "India"*15	Q1, AL1, SP1, YE1,CR1, CN1, S1, CT1, ST1, PC1, C3	Rejected: Exceeds 50 characters