IT-314 Software Engineering

Black Box Testing:

G31 - Swasthya Sarathi

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1. Patient Registration Page:

Description:

The **Patient Registration Page** is a user-friendly interface designed to onboard patients seamlessly into the healthcare management system. This page allows users to create their profiles by providing essential personal information .

Equivalence Classes Table:

Equivalence Class ID	Description	Valid/Invalid	Example Input
EC1	Properly formatted email	Valid	example@domain.com
EC2	Missing "@" in email	Invalid	example.com
EC3	Missing domain in email	Invalid	example@
EC4	Contains invalid characters in email	Invalid	exa mple@domain.com
EC5	Button pressed after valid email	Valid	example@domain.com
EC6	Button pressed without entering email	Invalid	(empty)

EC7	Button pressed with invalid email	Invalid	example.com
EC8	Alphabetic names	Valid	JHarsh
EC9	Name contains digits	Invalid	Harsh123
EC10	Name contains special characters	Invalid	harsh@Doe
EC11	Name field is empty	Invalid	(empty)
EC12	Password meets all constraints	Valid	Password@123
EC13	Password less than 8 characters	Invalid	Pass@1
EC14	Password missing uppercase letter	Invalid	password@123
EC15	Password missing lowercase letter	Invalid	PASSWORD@123
EC16	Password missing special character	Invalid	Password123
EC17	Password missing number	Invalid	Password@

EC18	Confirm password matches password	Valid	Password@123
EC19	Confirm password does not match password	Invalid	Password: Password@123, Confirm Password: Password123@
EC20	Contact number is 10 digits	Valid	9876543210
EC21	Contact number is not 10 digits	Invalid	12345
EC22	Nationality entered	Valid	Indian
EC23	Nationality not entered	Invalid	(empty)
EC24	Date selected from calendar	Valid	01/01/2000
EC25	Date not selected	Invalid	(empty)
EC26	Gender selected	Valid	Male
EC27	Gender not selected	Invalid	(empty)
EC28	Blood group selected	Valid	O+
EC29	Blood group not selected	Invalid	(empty)

EC30	Date of birth is a future date	Invalid	01/01/2050

Test Cases:

The Test Cases are in the following format:

{email,password,confirm password,name,contact no,nationality,date gender,blood group}

Test Case No.	Test Case	Expected Output	Original Output	Classes Covered	Pass/Fail
TC1	{"email": "anuj@email.com", "password": "Password@123", "confirm password": "Password@123", "name": "Anuj", "contact no": "9876543210", "nationality": "Indian", "date": "01/01/2000", "gender": "Male", "blood group": "O+"}	Valid	Valid	EC1, EC12, EC18, EC8, EC20, EC22, EC24, EC26, EC28	Passed

TC2	{"email": "anujemail.com", "password": "Password@123", "confirm password": "Password@123", "name": "Anuj", "contact no": "9876543210", "nationality": "Indian", "date": "01/01/2000", "gender": "Male", "blood group": "O+"}	Error: Invalid email. Missing @.	Error	EC2, EC12, EC18, EC8, EC20, EC22, EC24, EC26, EC28	Passed
TC3	{"email": "anuj@", "password": "Password@123", "confirm password": "Password@123", "name": "Anuj", "contact no": "9876543210", "nationality": "Indian", "date": "01/01/2000", "gender": "Male", "blood group": "O+"}	Error: Invalid email. Missing domain	Error	EC3, EC12, EC18, EC8, EC20, EC22, EC24, EC26, EC28	Passed
TC4	{"email": "", "password": "Password@123", "confirm password": "Password@123", "name": "Anuj", "contact no": "9876543210", "nationality": "Indian", "date": "01/01/2000", "gender": "Male", "blood group": "O+"}	Error: Email is required.	Error	EC6, EC12, EC18, EC8, EC20, EC22, EC24, EC26, EC28	Passed

TC5	{"email": "anuj@email.com", "password": "Password@123", "confirm password": "Password123@", "name": "Anuj", "contact no": "9876543210", "nationality": "Indian", "date": "01/01/2000", "gender": "Male", "blood group": "O+"}	Error: Passwords do not match	Error	EC19, EC1, EC8, EC12, EC20, EC22, EC24, EC26, EC28	Passed
TC6	{"email": "anuj@email.com", "password": "Password123", "confirm password": "Password123", "name": "Anuj", "contact no": "9876543210", "nationality": "Indian", "date": "01/01/2000", "gender": "Male", "blood group": "O+"}	Error: Missing special character in password	Error	EC16, EC1, EC8, EC18, EC20, EC22, EC24, EC26, EC28	Passed

TC7	{"email": "anuj@email.com", "password": "Password@", "confirm password": "Password@", "name": "Anuj", "contact no": "9876543210", "nationality": "Indian", "date": "01/01/2000", "gender": "Male", "blood group": "O+"}	Error: Missing numeric character In password	Error	EC15, EC1, EC8, EC18, EC20, EC22, EC24, EC26, EC28	Passed
TC8	{"email": "anuj@email.com", "password": "password@123", "confirm password": "password@123", "name": "Anuj", "contact no": "9876543210", "nationality": "Indian", "date": "01/01/2000", "gender": "Male", "blood group": "O+"}	Error: Missing uppercase character in password	Error	EC14, EC1, EC8, EC18, EC20, EC22, EC24, EC26, EC28	Passed

TC9	{"email": "anuj@email.com", "password": "PASSWORD@123", "confirm password": "PASSWORD@123", "name": "Anuj", "contact no": "9876543210", "nationality": "Indian", "date": "01/01/2000", "gender": "Male", "blood group": "O+"}	Error: Missing lowercase character.	Error	EC17, EC1, EC8, EC18, EC20, EC22, EC24, EC26, EC28	Passed
TC10	{"email": "anuj@email.com", "password": "Pass@1", "confirm password": "Pass@1", "name": "Anuj", "contact no": "9876543210", "nationality": "Indian", "date": "01/01/2000", "gender": "Male", "blood group": "O+"}	Error: Password too short.	Error	EC13, EC1, EC8, EC18, EC20, EC22, EC24, EC26, EC28	Passed
TC11	{"email": "anuj@email.com", "password": "Password@123", "confirm password": "Password@123", "name": "Anuj", "contact no": "12345", "nationality": "Indian", "date": "01/01/2000", "gender": "Male", "blood group": "O+"}	Error: Contact number must be 10 digits.	Error	EC21, EC1, EC8, EC12, EC18, EC22, EC24, EC26, EC28	Passed

TC12	{"email": "anuj@email.com", "password": "Password@123", "confirm password": "Password@123", "name": "Anuj", "contact no": "9876543210", "nationality": "", "date": "01/01/2000", "gender": "Male", "blood group": "O+"}	Error: Nationality is required.	Error	EC23, EC1, EC8, EC12, EC18, EC20, EC22, EC24, EC26, EC28	Passed
TC13	{"email": "anuj@email.com", "password": "Password@123", "confirm password": "Password@123", "name": "Anuj", "contact no": "9876543210", "nationality": "Indian", "date": "01/01/2000", "gender": "", "blood group": "O+"}	Error: Gender is required.	Error	EC27, EC1, EC8, EC12, EC18, EC20, EC22, EC24, EC26	Passed

TC14	{"email": "anuj@email.com", "password": "Password@123", "confirm password": "Password@123", "name": "Anuj", "contact no": "9876543210", "nationality": "Indian", "date": "01/01/2000", "gender": "Male", "blood group": ""}	Error: Blood group is required.	Error	EC29, EC1, EC8, EC12, EC18, EC20, EC22, EC24, EC26	Passed
TC15	**{"email": "anuj@email.com", "password": "Password@123", "confirm password": "Password@123", "name": "Anuj", "contact no": "9876543210", "nationality": "Indian", "date": "01/01/2100", "gender": "Male", "blood group": "O+"}**	**Error: Future dates are not allowed.**	**Error**	**EC25, EC1, EC8, EC12, EC18, EC20, EC22, EC24, EC28**	**Failed**

| TC16 | {"email": "anuj@email.com", "password": "Password@123", "confirm password": "Password@123", "name": "Anuj123", "contact no": "9876543210", "nationality": "Indian", "date": "01/01/2000", "gender": "Male", "blood group": "O+"} | Error: Name cannot contain numbers. | Error | EC9 | Failed |

2. Hospital Registration Page:

Description:

The Hospital Registration Page is a dedicated interface that enables hospitals to seamlessly register and become part of the healthcare management system. This page facilitates the onboarding of hospitals by collecting essential information, such as the hospital's name, contact details .

Equivalence Classes Table:

Equivalence Class ID	Description	Valid/Invalid	Example Input
EC1	Properly formatted email	Valid	hospital@domain.com
EC2	Missing "@" in email	Invalid	hospital.com
EC3	Missing domain in email	Invalid	hospital@
EC4	Contains invalid characters in email	Invalid	hos pital@domain.com
EC5	Button pressed after valid email	Valid	hospital@domain.com
EC6	Button pressed without entering email	Invalid	(empty)
EC7	Button pressed with invalid email	Invalid	hospital.com

EC8	Hospital name is not empty	Valid	City Hospital
EC9	Hospital name is empty	Invalid	(empty)
EC10	Password meets all constraints	Valid	Pass@word1
EC11	Password less than 8 characters	Invalid	Pass@1
EC12	Password missing uppercase letter	Invalid	password@1
EC13	Password missing lowercase letter	Invalid	PASSWORD@1
EC14	Password missing special character	Invalid	Password1
EC15	Password missing number	Invalid	Password@
EC16	Confirm password matches password	Valid	Pass@word1
EC17	Confirm password does not match password	Invalid	Password: Pass@word1, Confirm Password: PassWord@1
EC18	Contact number is 10 digits	Valid	9876543210

EC19	Contact number is not 10 digits	Invalid	12345
EC20	Date of foundation selected from calendar	Valid	15/08/1947
EC21	Date of foundation not selected	Invalid	(empty)
EC22	Hospital type selected	Valid	Private
EC23	Hospital type not selected	Invalid	(empty)
EC24	Registration number is 12 alphanumeric	Valid	AB123456CD78
EC25	Registration number not 12 characters	Invalid	AB123
EC26	Registration number contains non-alphanumeric characters	Invalid	AB@123$456
EC27	Date of birth is a future date	Invalid	01/01/2050

Test Cases Table:

The Test Cases are in the following format:

{email ,name , password, confirm password, contact number, date of foundation, hospital type, registration number}

Test Case No.	Test Case	Expected Output	Original Output	Classes Covered	Pass/Fail
TC1	{"email": "hospital@domain.com", "name": "City Hospital", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "date of foundation": "15/08/1947", "hospital type": "Private", "registration no": "AB123456CD78"}	Valid	Valid	EC1, EC8, EC10, EC16, EC18, EC20, EC22, EC24	Passed

TC2	{"email": "hospital.com", "name": "City Hospital", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "date of foundation": "15/08/1947", "hospital type": "Private", "registration no": "AB123456CD78"}	Error: Invalid email.	Error	EC2, EC8, EC10, EC16, EC18, EC20, EC22, EC24	Passed
TC3	{"email": "hospital@", "name": "City Hospital", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "date of foundation": "15/08/1947", "hospital type": "Private", "registration no": "AB123456CD78"}	Error: Invalid email.	Error	EC3, EC8, EC10, EC16, EC18, EC20, EC22, EC24	Passed

TC4	{"email": "hospital@domain.com", "name": "", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "date of foundation": "15/08/1947", "hospital type": "Private", "registration no": "AB123456CD78"}	Error: Hospital name cannot be empty.	Error	EC1, EC9, EC10, EC16, EC18, EC20, EC22, EC24	Passed
TC5	{"email": "hospital@domain.com", "name": "City Hospital", "password": "Pass@1", "confirm password": "Pass@1", "contact number": "9876543210", "date of foundation": "15/08/1947", "hospital type": "Private", "registration no": "AB123456CD78"}	Error: Password too short.	Error	EC1, EC8, EC11, EC16, EC18, EC20, EC22, EC24	Passed

TC6	{"email": "hospital@domain.com", "name": "City Hospital", "password": "Pass@word1", "confirm password": "PassWord@1", "contact number": "9876543210", "date of foundation": "15/08/1947", "hospital type": "Private", "registration no": "AB123456CD78"}	Error: Passwords do not match.	Error	EC1, EC8, EC16, EC17, EC18, EC20, EC22, EC24	Passed
TC7	{"email": "hospital@domain.com", "name": "City Hospital", "password": "password@1", "confirm password": "password@1", "contact number": "9876543210", "date of foundation": "15/08/1947", "hospital type": "Private", "registration no": "AB123456CD78"}	Error: Password missing uppercase letter.	Error	EC1, EC8, EC12, EC16, EC18, EC20, EC22, EC24	Passed

TC8	{"email": "hospital@domain.com", "name": "City Hospital", "password": "PASSWORD@1", "confirm password": "PASSWORD@1", "contact number": "9876543210", "date of foundation": "15/08/1947", "hospital type": "Private", "registration no": "AB123456CD78"}	Error: Password missing lowercase letter.	Error	EC1, EC8, EC13, EC16, EC18, EC20, EC22, EC24	Passed
TC9	{"email": "hospital@domain.com", "name": "City Hospital", "password": "Password123", "confirm password": "Password123", "contact number": "9876543210", "date of foundation": "15/08/1947", "hospital type": "Private", "registration no": "AB123456CD78"}	Error: Password missing special character.	Error	EC1, EC8, EC14, EC16, EC18, EC20, EC22, EC24	Passed

TC10	{"email": "hospital@domain.com", "name": "City Hospital", "password": "Password@", "confirm password": "Password@", "contact number": "9876543210", "date of foundation": "15/08/1947", "hospital type": "Private", "registration no": "AB123456CD78"}	Error: Password missing number.	Error	EC1, EC8, EC15, EC16, EC18, EC20, EC22, EC24	Passed
TC11	{"email": "hospital@domain.com", "name": "City Hospital", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "12345", "date of foundation": "15/08/1947", "hospital type": "Private", "registration no": "AB123456CD78"}	Error: Contact number must be 10 digits.	Error	EC1, EC8, EC10, EC16, EC18, EC19, EC20, EC22, EC24	Passed

TC12	{"email": "hospital@domain.com", "name": "City Hospital", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "date of foundation": "", "hospital type": "Private", "registration no": "AB123456CD78"}	Error: Date of foundation is required.	Error	EC1, EC8, EC10, EC16, EC18, EC20, EC22, EC24, EC21	Passed
TC13	**{"email": "hospital@domain.com", "name": "City Hospital", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "date of foundation": "15/08/1947", "hospital type": "Private", "registration no": "AB123"}**	**Error: Registration number must be 12 alphanumeric characters.**	**Error**	**EC1, EC8, EC10, EC16, EC18, EC20, EC22, EC24, EC25**	**Failed**

TC14	{"email": "hospital@domain.com", "name": "City Hospital", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "date of foundation": "15/08/1947", "hospital type": "Private", "registration no": "AB@123$456"}	Error: Registration number must be alphanumeric.	Error	EC1, EC8, EC10, EC16, EC18, EC20, EC22, EC24, EC26	Passed
TC15	**{"email": "hospital@domain.com", "name": "City Hospital", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "date of foundation": "15/08/1947", "hospital type": "Private", "registration no": "AB123456CD78"}**	**Error: Date of birth cannot be in future.**	**Error**	**EC1, EC8, EC10, EC16, EC18, EC20, EC22, EC24, EC27**	**Failed**

3. Doctor Registration Page:

Description:

The Doctor Registration Page is a streamlined platform designed to onboard healthcare professionals efficiently into the system. This page gathers critical details about doctors, including their name, qualifications, years of experience, specialization, gender, nationality, and contact information.

Equivalence Classes Table:

Equivalence Class ID	Description	Valid/Invalid	Example Input
EC1	Doctor name is not empty	Valid	Dr. John Doe
EC2	Doctor name is empty	Invalid	(empty)
EC3	Properly formatted email	Valid	doctor@domain.com
EC4	Missing "@" in email	Invalid	doctor.com
EC5	Missing domain in email	Invalid	doctor@
EC6	Contains invalid characters in email	Invalid	doc tor@domain.com
EC7	Password meets all constraints	Valid	Pass@word1
EC8	Password less than 8 characters	Invalid	Pass@1

EC9	Password missing uppercase letter	Invalid	password@1
EC10	Password missing lowercase letter	Invalid	PASSWORD@1
EC11	Password missing special character	Invalid	Password1
EC12	Password missing number	Invalid	Password@
EC13	Confirm password matches password	Valid	Pass@word1
EC14	Confirm password does not match password	Invalid	Password: Pass@word1, Confirm Password: PassWord@1
EC15	Contact number is 10 digits	Valid	9876543210
EC16	Contact number is not 10 digits	Invalid	12345
EC17	Gender selected from dropdown	Valid	Male
EC18	Gender not selected from dropdown	Invalid	(empty)

EC19	Specialization selected from dropdown	Valid	Cardiology
EC20	Specialization not selected from dropdown	Invalid	(empty)
EC21	Qualification is not empty	Valid	MBBS
EC22	Qualification is empty	Invalid	(empty)
EC23	Years of experience is numeric and positive	Valid	10
EC24	Years of experience is negative	Invalid	-5
EC25	About doctor is not empty	Valid	Experienced Surgeon
EC26	About doctor is empty	Invalid	(empty)
EC27	Date of birth is selected	Valid	01/01/1980
EC28	Date of birth not selected	Invalid	(empty)
EC29	Date of birth is a past date	Valid	01/01/1980

EC30	Date of birth is a future date	Invalid	01/01/2050
EC31	Nationality is not empty	Valid	Indian
EC32	Nationality is empty	Invalid	(empty)

Test Cases Table:

The Test Cases are in the following format:

{email, name ,password ,confirm password , name, contact no   ,

Gender,   specialization   , qualification , years of experience   ,   about doctor   ,   date of birth   ,   nationality   ,   photo }

Test Case No.	Test Case	Expected Output	Original Output	Classes Covered	Pass/Fail

TC1	{ "email": "anuj.kumar@gmail.com", "name": "Anuj Kumar", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "gender": "Male", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" }	Valid	Valid	EC1, EC3, EC7, EC13, EC15, EC17, EC19, EC21, EC23, EC25	Passed

| TC2 | { "email": "anuj.kumar@domain", "name": "Anuj Kumar", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "gender": "Male", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" } | Error: Invalid email | Error | EC2, EC3, EC7, EC13, EC15, EC17, EC19, EC21, EC23 | Passed |

TC3	{ "email": "anuj.kumar@", "name": "Anuj Kumar", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "gender": "Male", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" }	Error: Invalid email	Error	EC3, EC7, EC13, EC15, EC17, EC19, EC21, EC23	Passed

| TC4 | { "email": "anuj.kumar@gmail.com", "name": "", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "gender": "Male", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" } | Error: Name cannot be empty | Error | EC1, EC4, EC7, EC13, EC15, EC17, EC19, EC21, EC23 | Passed |

| TC5 | { "email": "anuj.kumar@gmail.com", "name": "Anuj Kumar", "password": "Pass1", "confirm password": "Pass1", "contact number": "9876543210", "gender": "Male", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" } | Error: Password too short | Error | EC1, EC5, EC7, EC13, EC15, EC17, EC19, EC21 | Passed |

TC6	{ "email": "anuj.kumar@gmail.com", "name": "Anuj Kumar", "password": "Pass@word1", "confirm password": "PassWord@1", "contact number": "9876543210", "gender": "Male", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" }	Error: Passwords do not match	Error	EC1, EC7, EC13, EC15, EC17, EC19, EC21, EC23	Passed

| TC7 | { "email": "anuj.kumar@gmail.com", "name": "Anuj Kumar", "password": "password@1", "confirm password": "password@1", "contact number": "9876543210", "gender": "Male", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" } | Error: Password missing uppercase letter | Error | EC1, EC7, EC6, EC13, EC15, EC17, EC19, EC21 | Passed |

TC8	{ "email": "anuj.kumar@gmail.com", "name": "Anuj Kumar", "password": "PASSWORD@1", "confirm password": "PASSWORD@1", "contact number": "9876543210", "gender": "Male", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" }	Error: Password missing lowercase letter	Error	EC1, EC7, EC8, EC13, EC15, EC17, EC19, EC21	Passed

| TC9 | { "email": "anuj.kumar@gmail.com", "name": "Anuj Kumar", "password": "Password123", "confirm password": "Password123", "contact number": "9876543210", "gender": "Male", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" } | Error: Password missing special character | Error | EC1, EC7, EC9, EC13, EC15, EC17, EC19, EC21 | Passed |

TC10	{ "email": "anuj.kumar@gmail.com", "name": "Anuj Kumar", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "12345", "gender": "Male", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" }	Error: Contact number must be 10 digits	Error	EC1, EC7, EC13, EC15, EC17, EC19, EC21, EC22	Passed

TC11	{ "email": "anuj.kumar@gmail.com", "name": "Anuj Kumar", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "gender": "Male", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "", "nationality": "Indian", "photo": "photo.jpg" }	Error: Date of birth is required	Error	EC1, EC7, EC13, EC15, EC17, EC19, EC21, EC23	Passed

TC12	{ "email": "anuj.kumar@gmail.com", "name": "Anuj Kumar", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "gender": "", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" }	Error: Gender is required	Error	EC1, EC7, EC13, EC15, EC17, EC19, EC21, EC23	Passed

TC13	{ "email": "anuj.kumar@gmail.com", "name": "Anuj Kumar", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "gender": "Male", "specialization": "", "qualification": "MBBS", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" }	Error: Specialization cannot be empty	Error	EC1, EC7, EC13, EC15, EC17, EC19, EC21, EC23	Passed

TC14	{ "email": "anuj.kumar@gmail.com", "name": "Anuj Kumar", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "gender": "Male", "specialization": "Cardiology", "qualification": "", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" }	Error: Qualification cannot be empty	Error	EC1, EC7, EC13, EC15, EC17, EC19, EC21, EC23	Passed
TC15	{ "email": "anuj.kumar@gmail.com", "name": "Anuj Kumar", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "gender": "Male", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" }	Error: Years of experience cannot be empty	Error	EC1, EC7, EC13, EC15, EC17, EC19, EC21, EC23	Passed

| TC16 | { "email": "anuj.kumar@gmail.com", "name": "Anuj Kumar", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "gender": "Male", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "-5", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "Indian", "photo": "photo.jpg" } | Error: Years of experience cannot be negative | Error | EC1, EC7, EC13, EC15, EC17, EC19, EC21, EC23 | Failed |

| TC17 | { "email": "anuj.kumar@gmail.com", "name": "Anuj Kumar", "password": "Pass@word1", "confirm password": "Pass@word1", "contact number": "9876543210", "gender": "Male", "specialization": "Cardiology", "qualification": "MBBS", "years of experience": "10", "about doctor": "Experienced Surgeon", "date of birth": "01/01/1980", "nationality": "", "photo": "photo.jpg" } | Error: Nationality is required | Error | EC1, EC7, EC13, EC15, EC17, EC19, EC21, EC23 | Passed |

4. Login Page:

Description:

The Login Page is the gateway to the system, providing secure and seamless access for users, including patients, doctors, and hospital managers. This page is designed to authenticate users through their email, password, and user type, ensuring that only authorized individuals gain entry to their respective portals.

Equivalence Classes Table:

Equivalence Class ID	Description	Valid/Invalid	Example Input
EC1	Properly formatted email	Valid	user@domain.com
EC2	Email is missing "@"	Invalid	userdomain.com
EC3	Email is missing domain	Invalid	user@
EC4	Email contains invalid characters	Invalid	user@dom ain.com
EC5	Correct password for the provided email	Valid	Correct Password for user@domain.com
EC6	Incorrect password for the provided email	Invalid	Incorrect Password for user@domain.com
EC7	User type selected from dropdown (Patient, Doctor, or Hospital)	Valid	Patient

EC8	User type not selected	Invalid	(empty)
EC9	Email, password, and user type combination exist in the database	Valid	user@domain.com, correctPassword, Doctor
EC10	Email, password, and user type combination do not exist in the database	Invalid	user@domain.com, incorrectPassword, Patient

Test Cases Table:

The Test Cases are in the following format:

{email, password, type}

Test Case ID	Test Case	Expected Output	Original Output	Classes Covered	Passed/Failed

TC1	{ "email": "user@domain.com", "password": "correctPassword", "type": "Patient" }	Redirect to Patient home page.	Redirected	EC1, EC5, EC7	Passed
TC2	{ "email": "userdomain.com", "password": "correctPassword", "type": "Doctor" }	Error: Invalid email format.	Error	EC2, EC5, EC7	Passed
TC3	{ "email": "user@", "password": "correctPassword", "type": "Hospital" }	Error: Invalid email format.	Error	EC3, EC5, EC7	Passed
TC4	{ "email": "user@domain.com", "password": "incorrectPassword", "type": "Patient" }	Error: Incorrect password.	Error	EC1, EC6, EC7	Passed
TC5	{ "email": "user@domain.com", "password": "correctPassword", "type": "" }	Error: User type must be selected.	Error	EC1, EC5, EC8	Passed
TC6	{ "email": "user@domain.com", "password": "incorrectPassword", "type": "" }	Error: User type must be selected and incorrect password.	Error	EC1, EC6, EC8	Passed

TC7	{ "email": "", "password": "correctPassword", "type": "Doctor" }	Error: Email cannot be empty.	Error	EC8	Passed
TC8	{ "email": "user@domain.com", "password": "correctPassword", "type": "Doctor" }	Redirect to Doctor home page.	Redirected	EC1, EC5, EC7, EC9	Passed
TC9	{ "email": "user@domain.com", "password": "correctPassword", "type": "Hospital" }	Redirect to Hospital home page.	Redirected	EC1, EC5, EC7, EC9	Passed
TC10	{ "email": "user@domain.com", "password": "incorrectPassword", "type": "Doctor" }	Error: Incorrect password.	Error	EC1, EC6, EC7, EC10	Passed
TC11	{ "email": "user@domain.com", "password": "correctPassword", "type": "Patient" }	Error: User type mismatch.	Error	EC1, EC5, EC7, EC10	Passed

5. Book An Appointment :

Description:

The **Book Appointment Page** is a streamlined interface designed to connect patients with their desired healthcare providers effortlessly. This page allows logged-in patients to schedule appointments with doctors by selecting a convenient date and time.

With a focus on user convenience, the page ensures that only future dates and times can be chosen, eliminating the possibility of scheduling errors. Patients are guided through a seamless process that helps them secure their appointments quickly and efficiently.

Equivalence Classes Table:

Equivalence Class ID	Description	Valid/Invalid	Example Input
EC1	Patient is logged in and has access to the booking page	Valid	Logged in patient with valid session
EC2	Patient is not logged in and tries to access the booking page	Invalid	Patient not logged in
EC3	Selected appointment date is a valid future date	Valid	2024-12-10
EC4	Selected appointment date is in the past	Invalid	2024-10-25
EC5	Selected appointment time is valid and in the future	Valid	10:30 AM (future time)
EC6	Selected appointment time is in the past	Invalid	9:30 AM (past time)

Test Cases Table:

The Test Cases are in the following format:

{email, password, type}

Test Case ID	Test Case	Expected Output	Original Output	Classes Covered	Passed/Failed
TC1	{ "date": "2024-12-10", "time": "10:30 AM", "description": "Future appointment" }	Appointment successfully booked.	Appointment booked	EC1, EC3, EC5	Passed
TC2	{ "date": "2024-12-10", "time": "10:30 AM", "description": "Not logged in" }	Error: Must be logged in to book an appointment.	Error	EC2	Passed
TC3	**{ "date": "2024-10-25", "time": "10:30 AM", "description": "Past date" }**	**Error: Cannot select past date.**	**Error**	**EC1, EC4, EC5**	**Failed**

| TC4 | { "date": "2024-12-10", "time": "9:30 AM", "description": "Past time" } | Error: Cannot select past time. | Error | EC1, EC3, EC6 | Passes |

6. Search A Doctor :

Description:

The Search a Doctor functionality is an intuitive feature designed to help patients find the right doctor with ease. It allows patients to search for doctors based on their name, specialization, or the hospital they are affiliated with, providing a personalized and flexible approach to finding medical expertise.

Equivalence Classes Table:

Equivalence Class ID	Description	Valid/Invalid	Example Input
EC1	Query matches a doctor's name	Valid	"Dr. Anuj"
EC2	Query matches a doctor's specialization	Valid	"Cardiologist"
EC3	Query matches a hospital name affiliated with doctors	Valid	"City General Hospital"
EC4	Query is an empty string	Valid	""

Test Cases Table:

Test Case ID	Test Case	Expected Output	Original Output	Classes Covered	Passed/Failed
TC1	{ "query": "Dr. Anuj" }	List of doctors matching the name.	Doctors displayed	EC1	Passed
TC2	{ "query": "Cardiologist" }	List of doctors with specialization.	Doctors displayed	EC2	Passed
TC3	{ "query": "City General Hospital" }	List of doctors affiliated with the hospital.	Doctors displayed	EC3	Passed
TC4	{ "query": "" }	List of all doctors.	Doctors displayed	EC4	Passed

7. Doctor Appointment Completion :

Description:

The Doctor Appointment Completion functionality is a key feature designed to facilitate the seamless conclusion of a patient's visit to the doctor. It allows doctors to efficiently document the necessary details following a consultation. Whether it's prescribing medications, uploading prescriptions, or submitting reports, this feature ensures that all necessary information is securely recorded and processed for the patient's medical record.

Doctor Appointment Completion Equivalence Classes:

Equivalence Class ID	Description	Valid/Invalid	Example Input
EC1	All fields (medicine, prescription, report) are filled	Valid	{ "medicine": "Paracetamol", "prescription": "Take after meals", "report": "test_results.pdf" }
EC2	Some fields are left empty	Valid	{ "medicine": "Paracetamol", "prescription": "", "report": "" }
EC3	All fields are left empty	Valid	{ "medicine": "", "prescription": "", "report": "" }

Test Cases Table :

Test Case ID	Test Case	Expected Output	Original Output	Classes Covered	Passed/Failed
TC1	{ "medicine": "Paracetamol", "prescription": "Take after meals", "report": "test_results.pdf" }	Appointment completed successfully	Success	EC1	Passed
TC2	{ "medicine": "Paracetamol", "prescription": "", "report": "" }	Appointment completed successfully	Success	EC2	Passed
TC3	{ "medicine": "", "prescription": "", "report": "" }	Appointment completed successfully	Success	EC3	Passed