**Javascript**

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| **Regarding notifications** |

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| **Regarding Updated Code with PAN Validation** |

<script>

$(document).ready(function() {

$('form').submit(function(event) {

var pancardno = $("[name='pancardno']").val().trim();

// PAN Card Validation Pattern (Indian Format: AAAAA9999A)

var panPattern = /^[A-Z]{5}[0-9]{4}[A-Z]{1}$/;

if (!panPattern.test(pancardno)) {

alert("Enter a valid PAN Card number (Format: AAAAA9999A)");

$("[name='pancardno']").val('');

event.preventDefault();

return false;

}

});

});

</script>

**✅ PAN Card Number Validation Rules**

1️⃣ **First 5 characters** → Only **uppercase letters** (A-Z)  
2️⃣ **Next 4 characters** → Only **digits** (0-9)  
3️⃣ **Last character** → Only **uppercase letter** (A-Z)

**🎯 Example Cases**

| **PAN Number** | **Valid?** | **Reason** |
| --- | --- | --- |
| CSWPR9192Q | ✅ Valid | Matches format |
| cswpr9192q | ❌ Invalid | Lowercase letters used |
| CSWP99192Q | ❌ Invalid | 6 letters instead of 5 |
| CSWPR91A2Q | ❌ Invalid | Letter in place of digit |
| CSWPR9192 | ❌ Invalid | Missing last letter |

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| **Regarding Fixed JavaScript Code with Email Validation** |

<input type="text" name="personalemail" placeholder="Enter Email">

<button id="submitBtn">Submit</button>

<script>

document.getElementById("submitBtn").addEventListener("click", function(event) {

var personalemail = $("[name='personalemail']").val().trim(); // Trim spaces

// Regular Expression for Valid Email

var emailPattern = /^[a-zA-Z0-9.\_%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}$/;

// Check if email is valid

if (!emailPattern.test(personalemail)) {

alert("Enter a valid email address!");

$("[name='personalemail']").val(''); // Clear input

event.preventDefault(); // Prevent form submission

return false;

}

});

</script>

**💡 Explanation of Email Validation (emailPattern)**

| **Pattern** | **Explanation** |
| --- | --- |
| ^ | Start of string |
| [a-zA-Z0-9.\_%+-]+ | Allowed characters before @ (letters, numbers, .\_%+-) |
| @ | **Must have @ symbol** |
| [a-zA-Z0-9.-]+ | Allowed characters after @ (letters, numbers, . and -) |
| \. | **Must have dot (.) before domain** |
| [a-zA-Z]{2,}$ | Domain extension (e.g., .com, .in, .org, etc.) |
| $ | End of string |

**🎯 Example Cases**

✅ **Valid Emails:**  
✔ test@gmail.com  
✔ my.email123@domain.co.in  
✔ user.name@example.org

❌ **Invalid Emails:**  
❌ test@.com → (Dot missing before domain)  
❌ user@domain → (No extension like .com)  
❌ hello@domain..com → (Double dot issue)

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| **Regarding regular expression if (!/^\d+$/.test(mobile\_no)) {** |

**Breakdown of the Code**

**🔹 1. ! (Logical NOT Operator)**

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if (!/^\d+$/.test(mobile\_no)) {

* **! (NOT)** ka matlab hai **"agar condition false ho toh if block execute hoga"**
* Yani agar mobile number valid digits nahi hai, tab alert show hoga aur form submit nahi hoga.

**🔹 2. /^\d+$/ (Regular Expression - RegEx)**

Yeh **pattern matching** ke liye use hota hai jo verify karta hai ki **sirf digits hain ya nahi**.

| **Pattern** | **Explanation** |
| --- | --- |
| / / | Yeh **Regular Expression** ke start aur end markers hain |
| ^ | Yeh batata hai ki match **start** se hona chahiye (pura string check karega) |
| \d | Yeh ek **digit (0-9)** ko represent karta hai |
| + | Kam se kam **1 ya usse zyada digits** hone chahiye |
| $ | Yeh batata hai ki match **end** tak hona chahiye (pura string check karega) |

👉 **Iska Matlab:**

* Agar **pure string me sirf digits (0-9) hain** tabhi yeh **true** return karega.
* Agar koi **letter (A-Z, a-z), space, ya special character (@,#,$ etc.)** aaya toh **false** return karega.

**🔹 3. .test(mobile\_no)**

js

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.test(mobile\_no)

* **.test() method** Regular Expression ka ek method hai jo kisi **string** ko test karta hai aur true ya false return karta hai.
* Agar mobile\_no **pure digits** hai, toh true return karega.
* Agar mobile\_no me koi **non-digit character** hai, toh false return karega.

**Overall Logic of the Condition**

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if (!/^\d+$/.test(mobile\_no)) {

* **Step 1:** /^\d+$/ yeh check karega ki mobile\_no sirf digits hai ya nahi.
* **Step 2:** .test(mobile\_no) agar **true** return karega toh iska matlab hai **valid digits hain**.
* **Step 3:** **! (NOT operator)** true ko false me convert karega aur condition execute nahi hogi.
* **Step 4:** **Agar false return hota hai (matlab number me kuch aur bhi hai jaise letters ya special characters), toh ! use hone ke baad if condition true ho jayegi** aur error message dikhayega.

**Example Cases**

**✅ Valid Cases (Sirf Digits)**

| **Input** | **Test Result (.test())** | **Final Condition (! .test())** | **Form Allowed?** |
| --- | --- | --- | --- |
| "1234567890" | true | false | ✅ Yes (Valid) |
| "987654" | true | false | ✅ Yes (Valid) |

🔹 **Yahan if condition false ho jayegi, aur form submit ho jayega.**

**❌ Invalid Cases (Koi aur Character ho)**

| **Input** | **Test Result (.test())** | **Final Condition (! .test())** | **Form Allowed?** |
| --- | --- | --- | --- |
| "123ABC" | false | true | ❌ No (Invalid) |
| " 12345" | false | true | ❌ No (Invalid) |
| "98765@#" | false | true | ❌ No (Invalid) |

🔹 **Yahan if condition true ho jayegi, aur alert aayega aur form submit nahi hoga.**

**Complete Example in JavaScript**

html

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<input type="text" name="mobile\_no" placeholder="Enter Mobile No">

<button id="submitBtn">Submit</button>

<script>

document.getElementById("submitBtn").addEventListener("click", function(event) {

var mobile\_no = document.querySelector("[name='mobile\_no']").value;

// Check if input contains only digits

if (!/^\d+$/.test(mobile\_no)) {

alert("Enter mobile number using only digits!");

document.querySelector("[name='mobile\_no']").value = ''; // Clear input

event.preventDefault(); // Prevent form submission

}

});

</script>

**Summary**

👉 **/^\d+$/ Regular Expression:**

* **^** → Start of string
* **\d+** → One or more digits (0-9)
* **$** → End of string
* **test(mobile\_no)** → Check karega ki string **sirf digits hai ya nahi**
* **! operator** → Agar koi non-digit character mila toh error dikhayega