HCI HW4
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Part 1

I choose to do heuristic evaluation of NADRA's website

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Product: NADRA website
Task: Applying for renewal of CNIC

Visibility of System Status:

Issues:
1) When first loading the initial screen there comes a pop-up which is actually the short story of NADRA's history, how they get to form etc, the issue is that at first I didn't even know what this is until I read the whole text and then realized this is their background/history.
2) Usually when we hover our cursor to any navigation option or any other option there is a shaded/fade color over that option, but there is no any such visual feedback such that the user knows that he/she is going to click which option also it makes unclear whether that option is a interactive or just a text.

Recommendations:
1) There should be added a clear and concise title at the top of the popup (e.g., "Our History" or "About NADRA") along with a brief summary line. Also they should consider including a dismiss (×) button more visibly so users know it's optional reading and not part of the main navigation or services.
2) There should be added hover effects (e.g., color fade, underline, slight zoom, or button shadow) to navigation elements and buttons. This will give immediate feedback and increase clarity about what is clickable.

Match Between System and the Real World:

Issues:

1) On the navigation bar there is the option named 'NADRA services charter', this is a term with which I wasn't familiar. I didn't even know what a service charter was.
2) Again on the navigation bar there is an option 'SIFC' . I didn't know about this term as this is the word I was seeing for the first time and havent seen on any other website/app.
3) When hovering over any option there usually by convention appears the relevant sub options of that main option but on the NADRA website this only happens for 1-2 main options present on the bar and not for each which is against the convention.

Recommendations:

1) Instead of "NADRA Services Charter" there should be more user-friendly words like "List of NADRA Services" or any other more common word for it which the user can understand and take action.
2) If SIFC is a term necessary to be included then its relevant meaning or synonym should be there which is common and is understandable to the user too.
3) There should be consistent behavior across all main menu items if sub-options exist for any category they should be displayed on hover like a typical dropdown menu because this will align with users' mental models and will improve usability too.

User Control and Freedom

Issues:

1) The initial story box which comes when we initially load the website or go on the home page, has a very small exit (cross) button which isnt visible enough.
2) For example if I go to the 'NADRA services charter' and its page loads, then there is no back/exit option given in the web page to go back to the main menu, we have to click on the back option of the browser not the webpage itself.

3) Also if i click any option by mistake then there is no return to previous option or back arrow given so hence there is no undo or redo supported.

Recommendations:
1) There should be Improved visibility of popup close buttons like by increasing size, contrast, and possibly include a close label to make it more user-friendly and visible.
2) There should be clearly visible "Back" or "Cancel" buttons on the page specially where users may navigate away by mistake.

Consistency and Standards

Issues:
1) Some navigation items show a dropdown on hover while others options don't which is not consistent behaviour that one might expect.
2) The design of interactive elements like cards is inconsistent, because only the images are clickable while titles and text and the card as whole are not, which is not a standard card interaction which is observed on every other web page.
3) The website uses different styles for buttons and links there are green buttons in one section and then plain underlined text in another without clearly showing which are clickable.

Recommendations:

1) One thing should be made sure of that either all have hover dropdowns or none do to maintain consistency but preferably since there are already many sub options so there should be hover for each main navigation option in the bar
2) A consistent card interaction should be used as standard where the entire card (image + text) is clickable
3) There should be one theme and that should be consistent, since nadra is for pakistan then it should be green and white theme in a good contrast and buttons shape consistent too.

Error prevention:

The website does not provide confirmation before taking important actions which increases the chance of user mistakes. Also there are no warning messages when navigating or being redirected to external pages once I click the apply now on renewal of CNIC by mistake.

To improve this the website should include confirmation popups, clear warning messages before opening any other connected website/page and prompts that ask users if they're sure before leaving or refreshing a form. This would then reduce errors.

Recognition rather than recall:

While using the website I didn't see that some parts of the interface were clickable like the cards on the Identity Documents page. Only the image is clickable and I expected the whole card or at least the text to be clickable too. I also didn't understand what some terms there meant because there were no tooltips or short descriptions of them like in the info icon or something like that. This made me stop and think on what to do next which slowed my intended task which i was going to perform.

To improve this the website should make clickable areas more clear with hover/fade effects and make the entire card interactive. By adding small info icons near unfamiliar terms would also help users understand things without having to remember or figure them out on their own by using google.

Flexibility and Efficiency of Use:

While using the website I didn't see any shortcuts or faster ways to access frequently used services. There are no keyboard shortcuts either and no quick access buttons or saved choices that would help returning me/user complete tasks more quickly. To improve this the website could add features like quick access for recently used services, a user dashboard for logged-in users or even basic accelerators like a search bar or shortcuts for common actions. This would help experienced users finish tasks more quickly.

Aesthetic and Minimalist Design:

While using the website I didn't see what to focus on because there were too many visual elements competing for attention. There are multiple banners, large images, video sections, QR codes, and different colors that make the layout feel crowded. Some sections like the "Pak Visa" banner and the social media/video area take up a lot of space but aren't directly useful for someone trying to perform a task like applying for an ID or getting information. It feels overwhelming instead of clean and focused.

To improve this the website should reduce unnecessary visuals, limit banners to one or two key highlights, and push less important content like media and videos to a separate "Media" or "Gallery" page. The homepage should prioritize essential services and tasks so users can quickly find and complete what they came for.

Help Users Recognize,Diagnose, and Recover from Errors:

While using the website I didn't come across any clear error messages. If something goes wrong like a broken link or a failed action the website doesn't show a proper explanation or suggest what to do next. There's also no feedback when a page fails to load or if a form isn't submitted correctly. This left me confused and unsure about how to fix the problem.

To improve this the website should display clear simple error messages in plain language. It should also guide the user with helpful instructions like "Try again later," or "Check your connection," or link them to customer support when needed.

Help and documentation:

I didn't see help or FAQs are even available until I scrolled to the bottom or looked through different sections. The FAQs are present but they aren't highlighted or shown in context during key actions like applying or checking ID services. There's also no visible help when filling out forms or performing tasks.

To cater this the website should make FAQs more visible by placing them near relevant actions and making its button visible enough. Type of mini-guides or tutorials should appear during steps like filing a form, so users can get help right when they need it instead of having to search for it on the website and go through each option.

Did using the heuristics help you notice usability issues more effectively than regular browsing? Provide specific examples

Yes using heuristics helped me find usability issues much more clearly than just normal browsing. When I normally browse a website I usually focus on my main task and ignore smaller issues. But when doing the heuristics I saw details that made the website harder to use. For example using the heuristic "Match between System and Real World," I saw that some words like "NADRA Services Charter" and "SIFC" were not common terms, and I didn't understand them at first. This made me realize that new users would struggle too. Another heuristic, "Visibility of System Status," made me realize there was no visual change or feedback when hovering over menu items, making it hard to know what I'm selecting. Without the heuristics, I probably wouldn't have noticed these small but important problems that affect user experience.

Would a smaller set of heuristics be more effective on a mobile interface? Identify specific heuristics that could be combined or removed, and explain the trade-offs involved

Yes, a smaller set of heuristics could be more effective for mobile interfaces because users have limited screen space and need simplicity. For example, "Recognition rather than Recall" and "Consistency and Standards" could be combined since both deal with how easily users recognize and understand interface elements. Also "Error Prevention" and "Help and Documentation" could be combined because both aim to guide and assist users in completing tasks without problems. The trade-off is that reducing heuristics might lead to missing

some specific usability issues, but it would allow quicker evaluations focused on the most common and critical issues.

Part 2

1) ***Apply for a new Pakistani passport:***
   a) From browser go to the official website of Directorate General of Immigration & Passports : https://dgip.gov.pk/home/
   b) Then from the top navigation bar click on the 'passport' option.
   c) Scroll down and read all of the laws/requirements and make sure you do not violate any of them.
   d) Once confirmed regarding the laws, then scroll up, on the left menu click on the General requirements for passport.
   e) Once you confirm the requirements, go on the left menu and click on 'passport application process'.
   f) Scroll down and click on the button 'apply online passport'.
   g) Then scroll down on the new page that loads up, click on the 'apply online passport now' option.
   h) Then a new page loads up, scroll down and click on 'get started' option.
   i) Then another page loads up, if you already have an account then just directly login or click on the register option.
   j) After successfully logging in, complete the application process uploading the necessary documents.

   a) *From browser go to the official website of Directorate General of Immigration & Passports : https://dgip.gov.pk/home/*

      No, the user does not always know which website to go to for passport application.
      Yes the official website link is visible in the search results
      Yes, seeing "Directorate General of Immigration & Passports" will help them understand they are in the right place.
      Usually yes but since the main page is too bulky with many options so they might not understand the feedback.

b) *Click on the "passport" option from top navigation*

"Passport" is a general term which might be confusing whether it's for applying or just info.
Yes, the option is there, but clarity could be improved.

Not clearly unless they explore the drop-down or page further.
Yes, the new page loads, but no visual cue (like highlight) confirms the click.

c) Scroll and read all requirements/laws
Unlikely unless clearly told it's important to read these.
Yes, but users might skip reading if it looks long or technical.
No, unless told that skipping may cause issues in the process.
No feedback is given if they ignore this step.

d) Click "General requirements for passport"
Yes, if they're already reading the instructions above.
Somewhat. It's in the left menu, which users might miss.
Only if they've read the previous sections.
Yes, the correct information page opens.

e) Click "passport application process"
Yes, it's a logical next step if following instructions.
Yes, but again, left-side menus can be overlooked.
Yes, if they've read the title.
Yes, process steps are shown next.

f) Click "apply online passport"

Yes, it's self-explanatory.
Yes, it's a button.
Yes, very direct.
Yes, new form opens which shows action was successful.

g) Click "apply online passport now"
Mostly yes, but wording repetition may cause confusion.
Yes, though scrolling is needed.

Yes, but could be clearer if button said "Proceed to Application".
New page loads, no confirmation like a message or color change.

h) Click "get started"

Yes, but only if they already know they need to register/login.
Yes
Yes but labels could be more descriptive
Page transition happens but no message.

i) Register or log in

Yes standard login interface.
Yes
Yes
Yes the user is taken to the next step.

j) Complete application & upload documents

Some may need guidance on uploading.
Yes, upload fields are shown.
Yes, it's common in online forms.
Could be better (success or error messages are needed)

2) **Apply for a new National Identity card:**
   a) On the browser go to the official website of NADRA:
      https://www.nadra.gov.pk/
   b) Then on the main navigation bar click on the option of 'identity services'.
   c) A new page loads up, scroll down and click on the image of the 'National identity card' option.
   d) Then a new page loads up, scroll down to the section of document requirements, click on the dropdown and from there select the option 'i want to renew my identity card'.
   e) Then click on the 'see solution' option.
   f) Read the documents required, once done then click on the 'apply now' option.

g) Then a new page loads up of NADRA authentication service, if you don't already have an account then click on 'create new account' option.

h) On registering fill the required field name, surname, phone number etc.

i) After filling the field a OTP and link will be sent on the email address provided.

j) Then login using the link sent.

k) Then a biometric verification will be needed.

l) Install the 'PAK-ID' mobile app as said in the information box.

m) After installing PAK-ID mobile app login with the same credentials.

n) Then do biometric authentication.

o) Once biometric verification is done Then come again on this https://id.nadra.gov.pk/e-id/authenticate link.

p) Login here again and then fill the fields required for new CNIC.

1. *Go to the NADRA website*

Yes, if the link is provided or if they know to search "NADRA official website" on Google.

Yes, the official site appears clearly in search results.
Yes, the NADRA site clearly connects with getting an ID card.
Yes, the homepage loads up confirming success.

2. Click on 'Identity Services' in the navigation bar
Yes, the term is clear and related to ID cards.
Yes, it's on the top bar.
Yes, since it matches the task of applying for a CNIC.
Yes, a new relevant page loads.

3. Scroll down and click on the image of 'National Identity Card'

 Some users might not realize it's clickable.
 Not very clearly needs better button style indicators
 Likely yes because of the CNIC picture and its also written
 Yes new page loads after clicking

4. Open document requirements dropdown and select "I want to renew my identity card"

Maybe not immediately, needs better guidance
Only after interacting with the dropdown.
Some confusion may occur since "renew" and "new" can be mixed up.
Yes, the next info appears.

5. Click "See Solution"

 Possibly, if they read carefully.
 Yes, but could be highlighted better.
 Yes, it suggests next steps.
 Yes, the solution (steps/documents) is displayed.

6. Click on "Apply Now"

Yes, it's a common action.
Yes, placed at the end of the solution box.
Yes, clearly the way to proceed.
Yes, it redirects to authentication service.

7. If no account, click "Create New Account"
 Yes, it's a common label.
 Yes.
 Yes, user knows it leads to registration.
 Yes, registration form opens.

8. Fill required fields (name, phone, etc.)
 Yes, it's self-explanatory.
 Yes, form is clear.
 Yes, it's a basic step in applying.
 Yes, successful form submission leads to next instruction.

9. OTP and verification link sent via email

Yes, instructions usually say "check email".
No direct visual on the site, needs clearer instruction.
Only if user checks email and follows steps.
Yes, once link is clicked, user proceeds.

10. Login through email link
 Yes, most people understand login via link.
 Email provides it.
 Yes, brings to secure login page.
 Yes, account access is granted.

11. Biometric verification needed
 No, might be a surprise without a clear warning before.
 Yes, mentioned on the page.
 Maybe confusing without explanation.
 No immediate feedback; users may get stuck.

12. Install "PAK-ID" app and login
 Only if they read instructions carefully.
 Yes, links or QR codes are provided.
 Some may not expect to switch to mobile.
 Yes, after login and verification in the app.

13. Do biometric verification in the app

The app gives instructions, but some users may need help.

Yes, within the app.

Yes, if they follow the process clearly.
Yes, shows success or failure.

14. Go back to NADRA CNIC portal and login again
Maybe not. It should remind the user clearly.
Only if user remembers or is guided.
A little unclear—might forget to return.
Yes, login allows form access.

15. Fill CNIC application fields
Yes, it's the final form.
Yes, form fields are clear.
Yes, the goal is clear.
Yes, success message or confirmation

Part 3

The heuristic evaluation showed more usability issues and insights compared to the cognitive walkthrough. This is because it allowed me to evaluate the entire website broadly by applying established usability principles like consistency, visibility of system status, and error prevention. Through this I was able to see issues like unfamiliar terminology (e.g., "SIFC"), lack of standard hover/shade effects on the navigation bar, and inconsistent menu behavior. These were general usability problems that affect the overall user experience regardless of the task. Heuristics helped in finding both minor and major design concerns that regular users might not consciously notice but that still disrupt usability.

There were also some specific issues I identified by only one method and not the other. For example in the cognitive walkthrough helped uncover task specific confusion, like the unclear transition from the NADRA website to the PAK-ID mobile app during the CNIC application process. It also showed me that users might not know they need to return to the same website after biometric verification is complete. These small step-by-step issues were easier to detect through the walkthrough as it focused on the user's decision making and understanding at each stage. However the heuristic evaluation missed these

detailed process issues because it focuses more on overall design patterns and structure rather than task flow.

When it comes to actionable recommendations, the heuristic evaluation provided broader improvements that could enhance the user experience across the whole website like using simpler labels, ensuring consistent menu behavior, and adding proper feedback cues. Meanwhile, the cognitive walkthrough gave more focused and practical suggestions for improving specific tasks like adding better instructions for downloading the app or clearly guiding users through account creation and login steps. Overall, both methods were valuable, but heuristic evaluation offered more wide ranging recommendations while the cognitive walkthrough helped fine tune the user experience for particular tasks.