

## INTANGIBLE CULTURAL HERITAGE WEBSITE PROGRAM

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### ABSTRACT

*The Indonesian nation has a long history of diverse cultural journeys. A number of intangible cultural heritages need to be preserved which refers to the 2003 UNESCO Convention. One of the best solutions for preserving intangible cultural heritage is to use information technology, namely websites. It is very appropriate to use a website to preserve intangible cultural heritage, which means introducing and promoting intangible cultural heritage to the wider community, especially the younger generation. The creation of the Intangible Cultural Heritage Website Program aims to help BPNB (Cultural Value Preservation Center) in the DKI Jakarta, Lampung, West Java and Banten areas. BPNB has a function to preserve and promote the acculturation of cultural heritage values to the wider community. The previous research is already conducted and the result was the user interface design of the website. The user interface design was seen as suitable already by BPNB. The next stage was to develop the database using MySQL and the website using PHP. Waterfall model was used to develop the website. User Acceptance Test have been carried out and the results are the website was successfully installed at BPNB Bandung, the users also says that the website is really helpful to document the intangible cultural heritage and also to socialize to the public. The users already seen the website and accepts the website fully. There was feedback from user which is to create the Android version of the website so it can be accessed more easily.*

**Keywords:** Intangible Cultural Heritage, Website Development, BPNB

## 1. INTRODUCTION

Diverse cultural heritage has been a title to Indonesia. The reflection of knowledge, laws, beliefs, morals, customs, arts or any other habits and abilities needed by humans as members of society is defined as culture [1]. Culture provides a relationship between the past, present and future [2]. At the 2003 UNESCO convention, giving freedom to the state to implement intangible cultural heritage [3]. The state must carry out a national inventory, which means creating a catalogue, register to identify, document and maintain cultural heritage [4]. Preservation of intangible culture can be done through, among other things: archiving books, audio-visual documentation, dissemination of information through digital technology or information technology which is currently developing rapidly [5]. In the digital age, until now there is still little research activity on intangible cultural heritage [6]. Research on the preservation of intangible cultural heritage was carried out against this background. DKI Jakarta, Banten, Lampung, and West Java's acculturation culture is preserved by BPNB which located in Bandung. A website program creation for intangible cultural heritage is very necessary nowadays, so that it can be accessed easily by the younger generation. Solutions using Information and Communication Technology are the best for documentation and dissemination of information.

The previous research has already been conducted by Ery Dewayani and team. The result of the research was a user interface design for West Java's Intangible Cultural Heritage Website. User interface of the website has been tested and the final result was that the user was satisfied with the design [7]. The next stage after the user interface design was the development of the website. Software development life cycle Waterfall model was used to develop the website and the testing will be carried out using System Testing and User Acceptance Test. This research was needed so that public can get to know the intangible cultural heritage values in the DKI Jakarta, Banten, Lampung, West Java areas through the website program. The BPNB can also have integrated database to preserve historical culture and socialized the culture through the website. The scope of making a website program was:

1. Creation of a database of cultural artworks in detail
2. Information on cultural artworks includes, among other things: photos, descriptions, geographical locations, related information.
3. The data and information search feature can be obtained, among others, from the region, the name of the cultural artwork, the name of the maestro, the name of the person in charge.

## **2. RESEARCH METHOD**

Software Development Life Cycle Waterfall Model was used to develop the website. Waterfall model itself consists 4 stages: namely the Planning Stage, the Analysis Stage, the Design Stage and the Implementation Stage which are carried out sequentially, which can be seen in Figure 1 [8]. The characteristics of waterfall model is that each stage must be completed before proceeding to the next stage [9]. Because there was no other software development technique at the time, the concept was modified from hardware development. Due to the rising expenses of redevelopment, losses resulting from errors in earlier stages, which are frequently significant and expensive, can be decreased thanks to this highly planned process [10]. The method for creating a database was by Normalization, and testing website programs was by using the User Acceptance Test method. Besides that, the research team obtained information that the heritage of cultural values can be classified into 5 categories with each element as determined by UNESCO, which can be seen in Table 1.

Mamam Rachman concludes that: the meaning of conservation can include all maintenance activities according to local situations and conditions. Conservation activities may also cover the scope of: preservation, restoration, reconstruction, adaptation and revitalization. The conservation values that need to be developed and maintained are: the value of planting, utilizing, preserving and studying in the physical and non-physical sense. The conservation movement is a joint work, it is impossible to do it alone. In addition, the conservation movement should not be an exclusive movement, but how to create a conservation movement that has the support and involvement of the public [11].

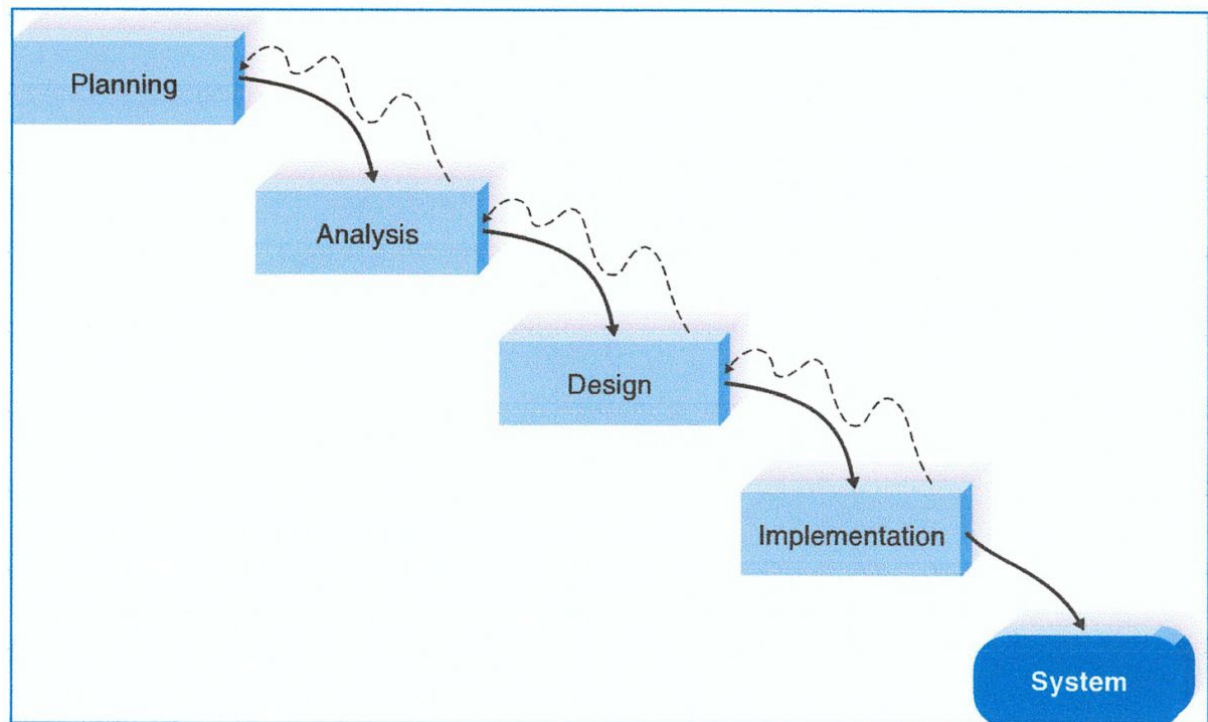


Figure 1. Waterfall Development Model  
Source: (Dennis, Wixom, & Tegarden, 2005)

Table 1. Categories and Elements of Heritage Cultural Values  
Source: UNESCO

Num	Category	Element
1.	Oral Traditions and Expressions	Language, poetry, folklore, mantras, prayers, folk songs, proverbs, folk riddles, lenong.
2.	Performing Arts	Dance arts, sound arts, music arts, theater arts, motion arts.
3.	Social Practices, Rituals and Festive Events	Traditional ceremonies, customary laws, systems of social organization, traditional kinship systems, economic systems, traditional celebrations.
4.	Knowledge and Practices Concerning Nature and The Universe	Knowledge of nature, cosmology, traditional medicine.
5.	Traditional Craftsmanship	Lenong, Traditional technology, traditional architecture, traditional clothing, traditional crafts, traditional culinary, traditional transportation, traditional weapons.

### 3. RESULTS AND DISCUSSIONS

The planning and analysis stage has been conducted in the previous research. The team conducted literature study and journal literature to obtain material on research. The research team visited the BPNB Bandung and interviewed the BPNB team. Information about the intangible cultural heritage and BPNB working areas has been gathered, namely DKI Jakarta, Bandung, Lampung, and West Java. After the requirements was analysed, the features and functions are built.

The website is created as a dynamic website, so there is a several account types that can access it; the public that can only see the data, the the head of the BPNB's account that can print the data, and admin that can update and print the data. The data needed to display the location of the map of intangible cultural heritage, the data needed was provincial, district/city sub-district data. Apart from guest users, there are two other types of accounts on this website that can be accessed by login to the created account, which are listed below (Dewayani, Wasino, & Lim, 2022).

1. Head, which user can create accounts for staff users but can only view data related to cultural artworks.
2. Staff, which user can input, change, and delete data related to cultural artworks.

The research team designed a conceptual data model based on the website solutions of the requirements. Besides the data model, the website menu program was also designed. The website program menu developed includes the main menu and submenu, describes the interface of the program created. The program interface includes the main menu, the main menu consists of sub-menus and each sub-menu has more detailed menus. The dialog menu program has already been designed from the previous research and can be seen in Figure 2.

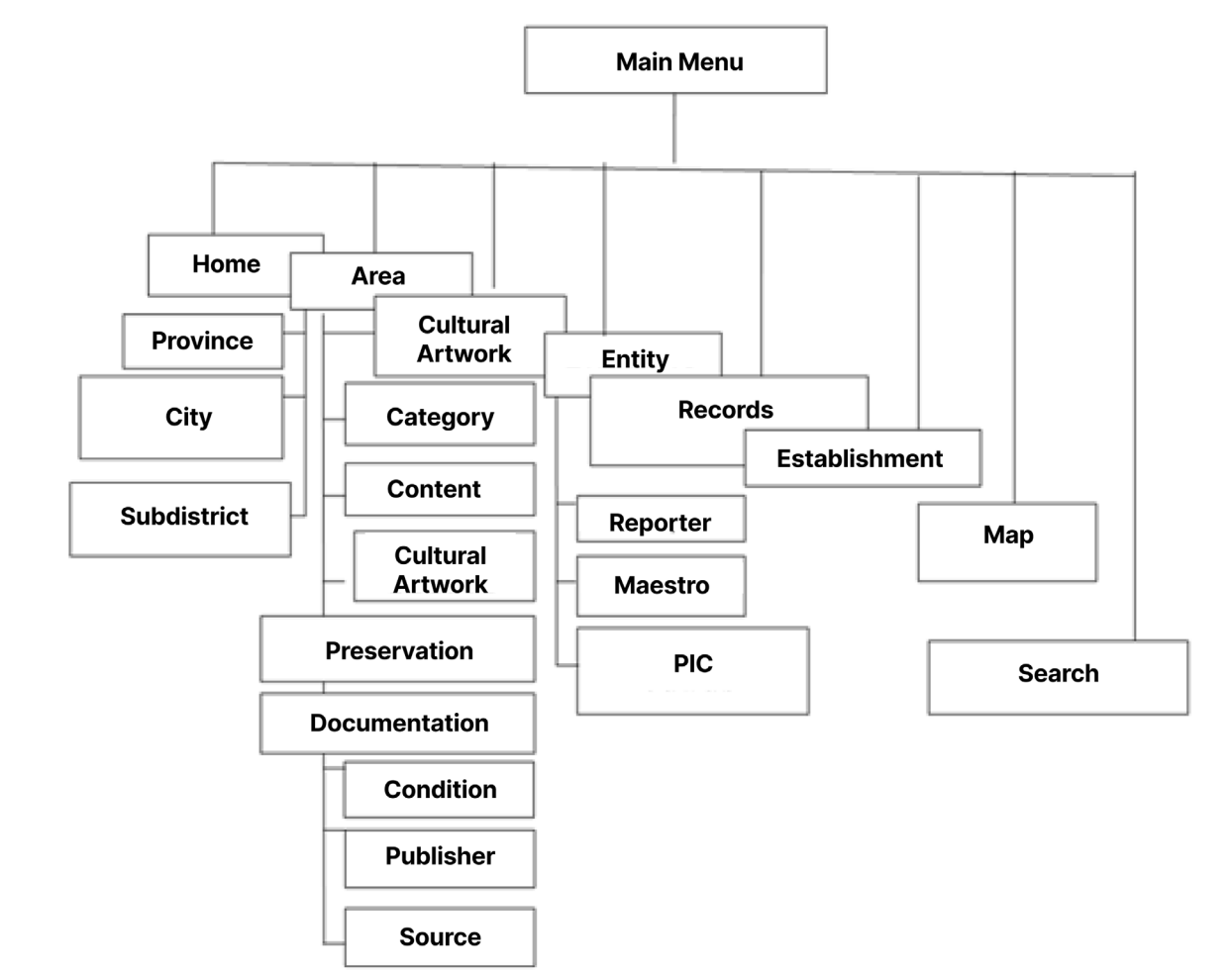


Figure 2. Dialog Menu Program  
Source: Personal Documentation

The next stage was to create the database using MySQL and develop the website next. The development team created the tables based on the requirements and website solutions. The tables developed can be seen in Figure 3. After the database was created in MySQL, the website can be developed. The website was developed using PHP. Manual book was created to explain the website in detail for the users. The manual book example can be seen in Figure 4. Internal testing was carried out using black box testing to make sure that the website has no errors and work properly. The result was that the website has already work properly with input and outputs. The website interface menus can be seen in Figure 5-11.

	Tabel	Tindakan	Baris	Jenis	Penyortiran	Ukuran	Beban
Baru							
admin	admin	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	1	InnoDB	latin1_swedish_ci	16.0 KB	-
detilunsur	detilunsur	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	6	InnoDB	latin1_swedish_ci	16.0 KB	-
detil_karyabudaya	detil_karyabudaya	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	11	InnoDB	utf8_unicode_ci	16.0 KB	-
detil_maestro	detil_maestro	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	5	InnoDB	utf8_unicode_ci	16.0 KB	-
detil_pelestarian	detil_pelestarian	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	2	InnoDB	utf8_unicode_ci	16.0 KB	-
detil_penanggunjawab	detil_penanggunjawab	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	12	InnoDB	utf8_unicode_ci	16.0 KB	-
detil_pustaka	detil_pustaka	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	2	InnoDB	utf8_unicode_ci	16.0 KB	-
dokumentasi	dokumentasi	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	2	InnoDB	latin1_swedish_ci	16.0 KB	-
foto_slider	foto_slider	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	3	InnoDB	utf8_unicode_ci	16.0 KB	-
kabupatenkota	kabupatenkota	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	34	InnoDB	latin1_swedish_ci	32.0 KB	-
karyabudaya	karyabudaya	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	6	InnoDB	latin1_swedish_ci	32.0 KB	-
kategoribudaya	kategoribudaya	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	5	InnoDB	latin1_swedish_ci	16.0 KB	-
kecamatan	kecamatan	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	121	InnoDB	latin1_swedish_ci	32.0 KB	-
kondisikaryabudaya	kondisikaryabudaya	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	5	InnoDB	latin1_swedish_ci	16.0 KB	-
maestro	maestro	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	3	InnoDB	latin1_swedish_ci	32.0 KB	-
pelapor	pelapor	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	5	InnoDB	latin1_swedish_ci	32.0 KB	-
pelestarian	pelestarian	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	2	InnoDB	latin1_swedish_ci	16.0 KB	-
penanggunjawabbudaya	penanggunjawabbudaya	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	11	InnoDB	latin1_swedish_ci	32.0 KB	-
pencatatan	pencatatan	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	3	InnoDB	utf8_unicode_ci	64.0 KB	-
penerbit	penerbit	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	1	InnoDB	latin1_swedish_ci	16.0 KB	-
penetapan	penetapan	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	1	InnoDB	latin1_swedish_ci	48.0 KB	-
provinsi	provinsi	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	4	InnoDB	latin1_swedish_ci	16.0 KB	-
pustaka	pustaka	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	2	InnoDB	latin1_swedish_ci	32.0 KB	-
unsurkaryabudaya	unsurkaryabudaya	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	11	InnoDB	latin1_swedish_ci	32.0 KB	-
users	users	Jelajahi Struktur Cari Tambahkan Kosongkan Hapus	3	InnoDB	latin1_swedish_ci	16.0 KB	-
	25 tabel	Jumlah	261	MyISAM	latin1_swedish_ci	608.0 KB	0 B

Figure 3. Database Tables  
Source: Personal Documentation

#### A.4. Data Kabupaten Kota

Pada tampilan ini, user dapat melihat data kabupaten atau kota. Contoh tampilan dapat dilihat pada Gambar 5. Berikut adalah kolom-kolom yang ada pada tabel:

1. Nomor, menandakan nomor baris.
2. Kode Kabupaten/Kota, berisi kode untuk kabupaten atau kota.
3. Kabupaten/Kota, berisi nama kabupaten atau kota
4. Rentang Kode Pos, berisi rentang kodepos untuk kabupaten atau kota.
5. Provinsi, berisi provinsi dari kabupaten atau kota tersebut.



Nomor	Kode Kabupaten/Kota	Kabupaten/Kota	Rentang Kode Pos	Provinsi
1	1801	Kab. Lampung Selatan	35352 - 35597	Lampung
2	1802	Lampung Tengah	34152 - 35513	Lampung
3	1803	Kab. Lampung Utara	34511 - 34586	Lampung
4	1804	Kab. Lampung Barat	34811 - 34886	Lampung
5	1805	Kab. Tulang Bawang	34590 - 34685	Lampung
6	1806	Tanggamus	35374 - 35686	Lampung
7	1807	Kab. Lampung Timur	34182 - 34396	Lampung
8	1808	Kab. Way Kanan	34760 - 34774	Lampung

Gambar 5 Data Kabupaten Kota

#### A.5. Data Kecamatan

Pada tampilan ini, user dapat melihat data kecamatan. Contoh tampilan dapat dilihat pada Gambar 6. Berikut adalah kolom-kolom yang ada pada tabel:

1. Nomor, menandakan nomor baris.
2. Kode Kecamatan, berisi kode untuk kecamatan.
3. Kecamatan, berisi nama kecamatan.
4. Kode Pos, berisi kodepos untuk kecamatan tersebut.
5. Kabupaten / Kota, berisi kabupaten atau kota dari kecamatan tersebut.



Nomor	Kode Kecamatan	Kecamatan	Kode Pos	Kabupaten / Kota
1	180107	Adiluwih (Adi Luwih)	35674	Kab. Pringsewu
2	180202	Bangun Rejo	34173	Lampung Tengah
3	180208	Seputih Raman	34155	Lampung Tengah
4	180210	Seputih Banyak	34156	Lampung Tengah
5	180212	Seputih Surabaya	34158	Lampung Tengah
6	180215	Bekri	34162	Lampung Tengah
7	180216	Seputih Agung	34166	Lampung Tengah

Gambar 6 Data Kecamatan

Figure 4. The West Java's Intangible Cultural Heritage Website Manual Book  
Source: Personal Documentation



## Sign In

 Username

 Password

Login

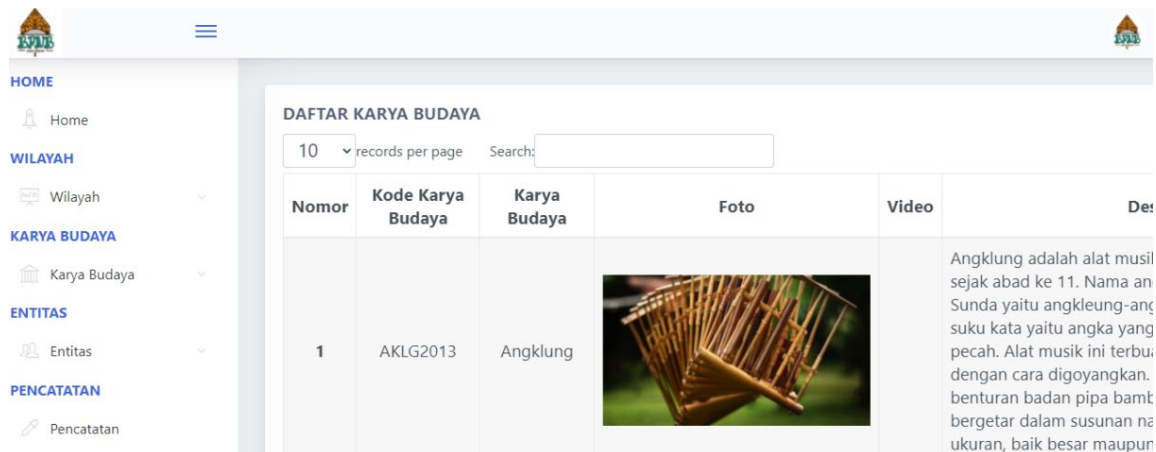
Figure 5. Login Display  
Source: Personal Documentation





Nomor	Kode Kategori	Kategori Karya Budaya	Keterangan
1	KG001	Tradisi lisan dan Ekspresi	Tradisi lisan dan ekspresi
2	KG002	Seni Pertunjukan	karya seni yang melibatkan aksi individu atau kelompok di tempat dan waktu tertentu. performance biasanya melibatkan empat unsur: waktu, ruang, tubuh si seniman dan hubungan seniman dengan penonton.
3	KG003	Adat Istiadat masyarakat, ritual, dan perayaan	suatu sistem pandangan hidup yang kekal, segar, serta aktual karena berdasarkan pada berbagai ketentuan yang terdapat pada alam yang nyata dan nilai positif, kebersamaan, kemakmuran yang merata, pertimbangan pertentangan, penyesuaian diri, dan berguna sesuai tempat/ waktu/ keadaan.

Figure 6. Display of the Cultural Artworks Category  
Source: Personal Documentation



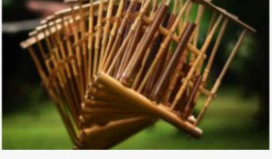
Nomor	Kode Karya Budaya	Karya Budaya	Foto	Video	Deskripsi
1	AKLG2013	Angklung			Angklung adalah alat musik sejak abad ke 11. Nama an Sunda yaitu angkleung-ang suku kata yaitu angka yang pecah. Alat musik ini terbuat dari bambu dengan cara digoyangkan. Cara memainkannya yaitu dengan hentakan badan pipa bambu bergetar dalam susunan nada tertentu. Angklung ada berbagai ukuran, baik besar maupun kecil.

Figure 7. Display of Angklung Cultural Artwork  
Source: Personal Documentation



Nomor	Kode Maestro	Maestro	Foto	Alamat	Kecamatan	Usia	Telepon	Riwayat
1	MS001	Daeng Soetigna		Garut, Indonesia Jawa Barat	Bandung Kidul	75	082297097328	Daeng Soetigna sebagai maestro pertama pada saat ini di afrika dalam kontes angklung.
2	MS002	Jaka Tingkah		Taman cibodas tangerang periuk	Periuk	21	081386091571	Jaka tingkah sebagai maestro taman cibodas periuk, 151

Figure 8. Display of Maestros  
Source: Personal Documentation



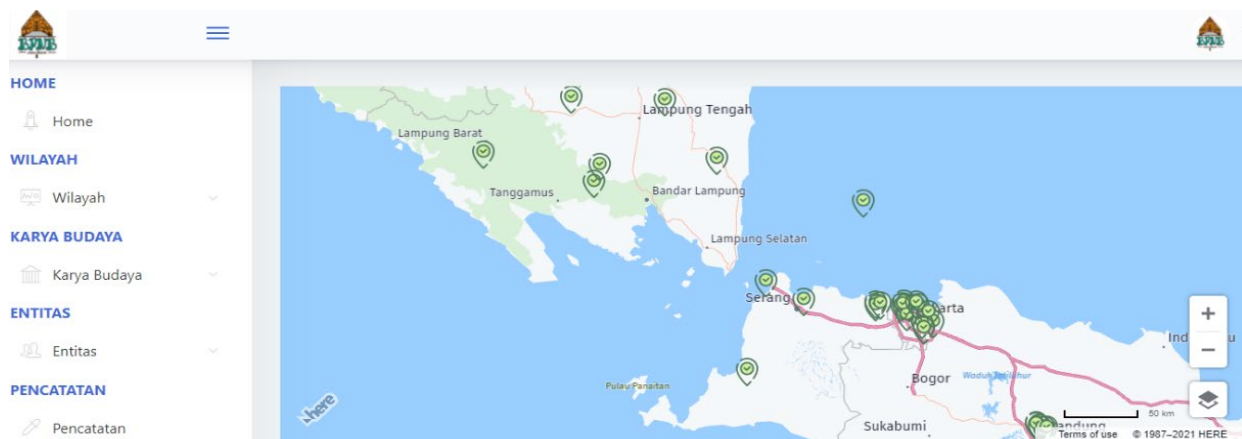


Figure 9. Display of Cultural Work Area Map  
Source: Personal Documentation



Figure 10. Display of Cultural Works on Map Markers  
Source: Personal Documentation

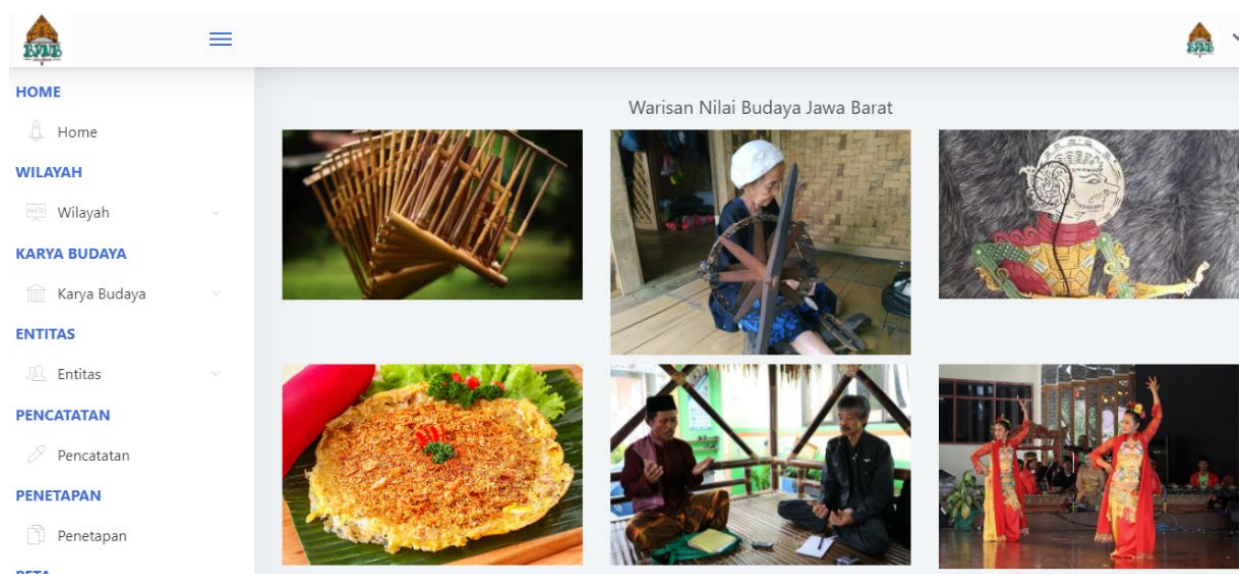


Figure 11. Main Menu  
Source: Personal Documentation

After the development and internal testing, the website was installed in BPNB Bandung. After implemented, User Acceptance Test was carried out. The Head of BPNB and the staffs tried out the website and the website were seen suitable and the input and outputs already suitable. The users said that the website program is very helpful for documenting intangible cultural heritage and can be used for outreach to the community. There was a suggestion from the users that the program should be expanded to Android version to make it easier to access. Now, the website is already been used by BPNB Bandung. The advantages of this website program are below.

1. Has a database, which is useful for documenting intangible cultural heritage data.
2. The database has complete attributes (details) for data collection.
3. This program can assist West Java BPNB in preserving cultural heritage values.

#### **4. CONCLUSIONS AND SUGGESTIONS**

In the digital age, until now there is still little research activity on intangible cultural heritage. BPNB is responsible to preserve DKI Jakarta, Banten, Lampung, and West Java's acculturation culture. There was an urgent need to develop a website for BPNB so that the data can also be seen by public. The previous research was carried out resulting in the user interface design of the website. The website is now developed using PHP and MySQL using Waterfall Model. The results from User Acceptance Test was that the database already represents useful information for data documentation of cultural artworks, which will be designated as intangible cultural heritage; The website program is appropriate and can assist BPNB in preserving and promoting intangible cultural heritage and can already be used by the West Java Cultural Value Preservation Service Unit and can be accessed by the wider community, so that it can introduce the West Java BPNB's intangible cultural heritage preserved data. The website program is an effort to preserve and promote the BPNB's intangible cultural heritage documentation. There is feedback from user which is to create the Android version of the website so it can be accessed more easily.

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