

Bal Vatsalya Marga: A Digital Child Welfare and Support Management System

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Abstract : The “Bal Vatsalya Marg” project aims to bridge this gap by developing a user-friendly digital platform that connects orphaned or abandoned children with nearby NGOs and local authorities, ensuring their immediate safety, care, and rehabilitation. Additionally, the project introduces a comprehensive NGO management system that streamlines core operations such as donation tracking, volunteer management, and visitor record keeping by integrating child welfare initiatives with modern digital management tools, this platform enhances transparency, operational efficiency, and community engagement. It serves as a centralized hub for donors, volunteers, and NGO staff—fostering collaboration, promoting social responsibility, and improving the overall effectiveness of child support initiatives. Ultimately, this platform is more than a technical innovation; it is a step toward building a compassionate society where every child receives the love, care, and opportunities they deserve.

Key Words: Child Welfare Management, NGO Management System, Orphan Support Platform, Digital Rehabilitation System, Donation and Volunteer Tracking, Child Safety and Protection.

1.INTRODUCTION

“Every child deserves love, care, and the right to education — yet thousands of orphans and underprivileged children struggle each day to access these basic needs.” Across many parts of our country, numerous children are found without guardianship, direction, or support due to poverty, abandonment, family breakdown, or social crisis. These children are left vulnerable, with limited access to education, healthcare, emotional stability, and a safe living environment. While several NGOs and government welfare agencies dedicate themselves to addressing these challenges, the lack of a unified communication channel often results in delays, mismanagement, or unawareness of where and how assistance can be delivered effectively.

The “Bal Vatsalya Marg” project aims to bridge this critical gap by developing a centralized, user-friendly digital platform where citizens can report orphaned or abandoned children and instantly connect them with nearby NGOs and local authorities. This ensures timely rescue, protection, and rehabilitation, enabling the child to receive care at the earliest possible stage.

The project not only facilitates child safety and welfare, but also empowers community participation, encouraging individuals to become active contributors to child protection efforts.

In addition, many NGOs working for child welfare face operational challenges such as managing donor relationships, maintaining volunteer records, managing resource distribution, and ensuring transparency in visitor or beneficiary interactions. This project addresses these challenges by integrating NGO administration management features into the platform. Through dedicated modules, NGO staff can maintain detailed logs of visitors, track donations, record volunteering activities, monitor follow-ups, and maintain institutional transparency. This leads to improved accountability, streamlined workflows, and stronger trust between NGOs and the community.

The platform also serves as a knowledge and support hub by providing educational materials, mentorship access, awareness programs, and emotional support resources for children who are part of the NGO network. It aligns technology with humanitarian vision—ensuring that support is not only delivered but sustained.

Ultimately, “Bal Vatsalya Marg” is more than a digital system—it stands as a movement toward social responsibility and collective care. By encouraging citizens to participate, enabling NGOs to operate more effectively, and safeguarding the rights of children, the project contributes to building a society where no child is left unnoticed, unsupported, or unheard. It seeks to create a safe, nurturing pathway—a pathway of affection, dignity, and hope—where every child is given the chance to grow and thrive.

2. Body of Paper

1. Related Work

1.1 Mission Vatsalya.

Mission Vatsalya is a child welfare program by the Government of India. Its main purpose is to protect children, and help them grow in a safe and supportive environment. Especially they work as child category like child is orphan, missing, Children in difficult situations and Children requiring care and protection. Provide opportunities for educational, personal growth and better future.

Mission Vatsalya aims to create a strong and caring system for children at every stage of life, Improving government and legal support systems in every district, Supporting NGOs, Child Care Institutions, Police, CWC, DCPU, etc.

Key Features:

1. It's a unified digital platform for all stakeholders-states, districts, child care institution, police etc.
2. Centralized database of children for provide care and protection(CNCP) and children in conflict with law (CCL) across categories (orphans, missing etc.,) so data can be shared and monitored.
3. The system uses standard data formats to keep information clear and transparent.
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1.2 khoya paya.

The Khoya-Paya Portal is a citizen-based digital platform launched by the Ministry of Women and Child Development (MWCD) in India, designed to help trace missing and found children. It also used to provide online detail of child to their parents or guidance. It enable for immediate reporting of missing child or orphans without doing any lengthy paperwork. It uses photographs, descriptions, and contact details for better chance of locating children. In this also citizens are involved for more help to searching and fast finding the children. Khoya-Paya works together with other government systems (Like Track Child). But unlike official systems that only authorities can use, Khoya-Paya also allows the general public to report missing or found children.

Key Features:

1. Citizens are included for reporting for missing children.
2. Upload detail information of children like photographs, videos, description of the child and circumstances.
3. Anyone who see or finds a missing child can give details publicly the portal, and other citizens can read that information and help.
4. Simple registration process for users (mobile number, ID proof) to start reporting.[2]

1.3 Childline 1098 platform.

Childline 1098 is a free 24-hour toll-free emergency phone service in India for children who need help, support, protection, or rescue. It is backed by the Ministry of Women and Child Development (MWCD) of the Government of India. A large number of children suffer from problems such as abuse, kidnapping, child labour, and running away from home, requiring immediate help and protection. If a child is in trouble or an adult notices a child who needs help, they can call 1098. The call goes to the Childline call center, where trained staff listen and understand the situation. If the child needs immediate help, a rescue team or a partner NGO is sent

to the location. Once the child is safe, they are provided with long-term support such as a shelter home, education, medical care, or help to reunite with their family. After this, Childline continues checking on the child's progress to make sure they remain safe and protected.

Key Features:

1. The Childline 1098 helpline is available all the time, day and night, every single day of the year. No any Holiday or break.
2. The call is completely free, no call charges are applied.
3. The helpline provides a wide range of services including rescue operations, medical treatment, legal support, temporary shelter, and emotional guidance.
4. Partnership model: Works with government departments, NGOs, police, hospitals, educational institutions.[3]

1.4 PM CARES for children.

It's a scheme launched by the Government of India on 29 May 2021 for children who lost both parents, or a legal guardian/adoptive parent, or whose surviving parent died due to the COVID-19 pandemic. Its aim to provide long-term support and protection to the children they can grow in the safe educated and secure environment. Also help both orphans and missing children. It also support children they lost their parents provide money for education, health insurance, and future financial support so these children can live safely and grow properly. This government scheme also provide loan for high education when child want to give high education in another country.

Key Features:

1. For each child under the scheme, the government sets aside ₹10 lakh in a protected financial account. This money cannot be used immediately.
2. This monthly financial support will continue until the child becomes 23 years old.
3. Every child who is covered under this scheme gets health insurance worth ₹5 lakh (5,00,000 rupees). This insurance is given under the Ayushman Bharat – PMJAY program.
4. The government gives education-related financial help to the children covered under this scheme. For school-going children, they can get a scholarship of ₹20,000 every year to support their studies.[4]

1.5 National Crime Records Bureau (NCRB).

The National Crime Records Bureau (NCRB) is an Indian government agency responsible for collecting, analyzing, and disseminating crime data across the country. The agency keeps track of all types of crimes happening in India, such as theft, murder, cybercrime, and terrorism. This system acts like a big online database that helps the police track criminals, find patterns in crime, and solve cases more efficiently. NCRB stores criminal records to help police catch repeat offenders and track criminals across India. NCRB publishes yearly reports, such crimes in India. To such detailed information of each types of crime and also support to see how changing over the time. Help to government to understand the crime pattern and provide more strategy and better rule to prevent and

control the crime. It also helps police from different states work together when a criminal or crime involves more than one state.

Key Features:

1. Crime Data Collection- Collect all detailed information of different types of crimes in India.
2. Digital Crime Track- Use systems like CCTNS to store crime data digitally and help to track criminals.
3. Publishes crime reports yearly, showing crime strategy and trend.
4. NCRB helps the police from different states work together by sharing information and coordinating investigations.[5]

1.6 National Commission for Protection of Child Rights (NCPCR)

The NCPCR is the main organization in India responsible for protecting children's rights. It checks whether children are getting proper safety, education, care, and support. It also looks into complaints of abuse or exploitation and helps take action to keep children safe. It checks whether child-related laws and rules are being followed, looks into reports of abuse or mistreatment, and coordinates with government departments to make sure every child is safe and properly cared for. It also used to check whether government programs are helping children, takes action when there are reports of abuse, trafficking, or neglect, and ensures that children's homes and shelters follow all safety rules meant to protect kids. The complaint form is available directly on the website. Users can upload documents, photos, or details related to the case. It acts as an online platform where cases are received, forwarded to authorities, and tracked to ensure proper action and protection of children.

Key Features:

1. Users can submit details, attach documents, and track complaint status.
2. Provides official rules, policies, and standards for child-care institutions. Includes safety guidelines, care standards, and compliance requirements.
3. Offers access to child-related laws like the JJ Act, POCSO Act, and RTE Act. Contains notifications, circulars, and government updates.
4. NCPCR uses the portal to follow up on complaints forwarded to police or district authorities.[6]

1.7 Smile Foundation

Smile Foundation is an Indian NGO that works to support underprivileged children and families. Smile Foundation is an NGO that implements education, healthcare, and community development programs for disadvantaged children and families across India. It focuses on providing education, healthcare, and livelihood opportunities. The website serves as an information portal for its initiatives, campaigns, impact reports, and volunteer opportunities. It provides learning opportunities for children who cannot attend school, offers medical help in areas with limited healthcare, and trains youth and women to improve their livelihood. By running these community-based initiatives, the foundation helps improve living conditions and creates better opportunities for disadvantaged people, making a positive impact on society.

Key Features:

1. Mission & Impact: Highlights programs in education, health, and empowerment and the people they help.
2. The Smile Foundation website highlights its main programs, including Education, Healthcare, Women Empowerment, Skill Training, and Disaster Relief.
3. The website lets people join as volunteers or interns so they can actively help with Smile Foundation's social work projects. Anyone interested can sign up online to participate and make a difference.
4. Online Donation : The website allows people to easily contribute funds online to support Smile Foundation's initiatives and help those in need.
5. The Smile Foundation website shares success stories, awards, and updates about its work. This shows how their programs are helping people and the real difference they are making.[7]

1.8 SOS Children's Villages of India

SOS India provides a safe and loving home for children who don't have parents or are at risk of losing them. The children get everything they need a home, education, healthcare, love, and emotional support. SOS India provides extra support to children who have special needs, are in difficult situations, or do not live with their parents. The organization offers foster care, temporary homes, and other forms of support to ensure these children feel safe, cared for, and emotionally supported, giving them a secure environment to grow and thrive. It also allows people to contribute to their work through online donations, volunteering, or internships. They can access important resources such as emergency help, contact details, and guidance for families and children in need. It provides family-like care to orphaned or vulnerable children and supports struggling families so that children do not have to leave home. It focuses on creating a family environment for children, not just temporary shelter.

Key features:

1. Program Information: Provides details about their programs, including children's villages, family strengthening, education, and skill training.
2. Online Donations: Lets visitors donate money easily to support children, families, and ongoing programs.
3. Success Stories and Impact Reports: Shares real-life stories, achievements, and updates to show the effect of their work and transparency.
4. Emergency and Disaster Relief: Offers details on emergency response efforts for children and families affected by disasters.[8]

1.9 Bal Raksha Bharat

Bal Raksha Bharat is an Indian non-governmental organization committed to securing a safe and promising childhood for every child across the country. Since its formal registration in India in 2008, the organization has adopted a holistic child-rights framework, working in the fields of education, health & nutrition, child protection and emergency relief. Their guiding aim is to ensure that children, particularly the marginalized, are not only protected from harm but also provided with opportunities to learn, grow and contribute to society.

The organizations work emphasizes long-term impact through community engagement, local partnerships, and evidence-based strategies. For instance, they focus on improving school attendance and learning outcomes, ensuring access to nutritious food and healthcare, protecting children from exploitation and abuse, and building resilience in children and families during crises such as natural disasters or pandemics. Bal Raksha Bharat also partners with governments, donors and civil society to widen its reach and strengthen systems that safeguard children.

Key Features

1. Works for child education, health, and safety across India.
2. Builds partnerships with communities and local NGOs.
3. Provides quick support during disasters and emergencies.
4. Promotes transparency through public reports and updates.
5. Uses online platforms to collect donations and connect volunteers.[9]

1.10 Child Rights and You (CRY)

Child Rights and You (CRY) is a well-known Indian non-governmental organization established in 1979 with the purpose of ensuring that every child in the country enjoys the basic rights of survival, education, protection, and participation. The main aim of this organization is to create an environment where children from underprivileged backgrounds can live with dignity, receive proper education, healthcare, and grow in a safe and caring atmosphere. CRY works across several regions in India by partnering with local communities, schools, and government bodies to strengthen child welfare systems and reduce inequality.

Key Features

1. Provides an easy platform for people to support child welfare through donations and volunteering.
2. Shares clear information about education, health, and protection programs for children.
3. Promotes awareness about child rights and encourages public participation.
4. Ensures transparency by showing how funds and resources are used.
5. Highlights real success stories to inspire community involvement.[10]

2. Objectives

- Locate orphans and missing children, Reunite children with their parents or guardians, ensuring safety and well-being.
- To ensure smooth and transparent NGO operations through automation.

- To develop a centralized system that maintains accurate records of visitors, volunteers and employees.
- To Promote handmade products by children and women, fostering skills, confidence, and financial independence.
- To create a digital bridge between citizens, NGOs, and the police department, ensuring that every orphaned or abandoned child receives immediate care, safety, and education opportunities

3. Procedure

3.1 Methodology:

3.1.1 DFD Level 2

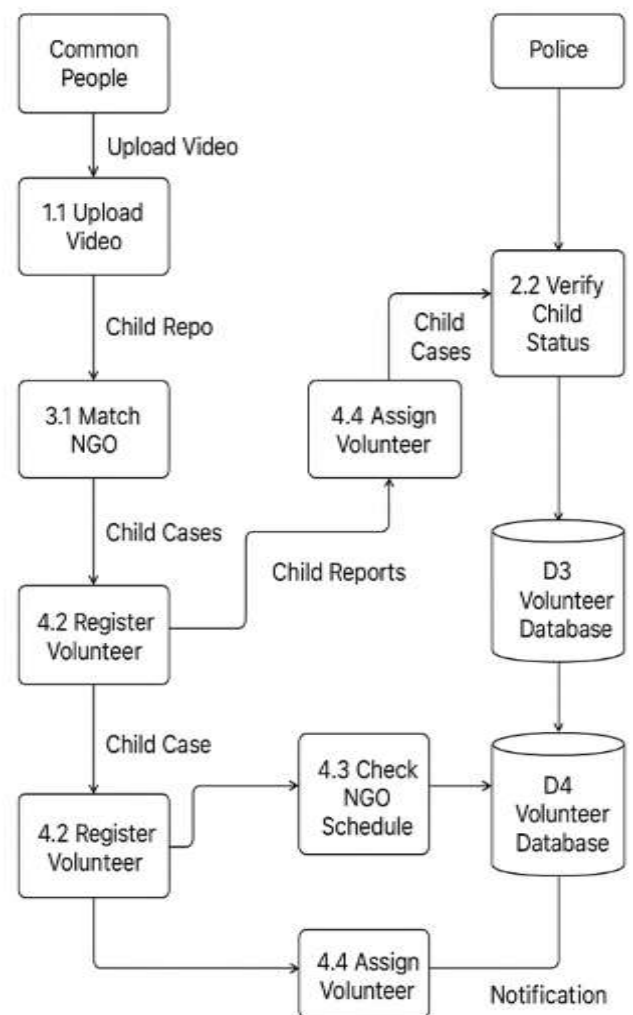


Figure DFD Level 2

3.2 Explanation

A Data Flow Diagram (DFD) Level-2 provides a detailed representation of how the Bal Vatsalya Marga System operates by illustrating the flow of information between common people, police authorities, NGOs, volunteers, and the system's internal databases. The process begins

when common people encounter an orphaned or missing child and upload a video through the system. This uploaded video first enters the Upload Video Process (1.1), where it is captured and stored securely in the Child Repository (D1). This repository acts as the initial storage point for all child-related submissions, ensuring the information is available for validation and further processing.

After the video is successfully uploaded, the system proceeds to the Validate Information Process (1.2). Here, the system checks the clarity of the video, confirms the presence of required details, and ensures the case is appropriate for further action. Once validated, the case progresses to the Match NGO Process (3.1), where the system identifies suitable NGOs based on location, specialization in child care, and resource availability. The matched NGO receives preliminary details about the case, allowing them to prepare for their role in rescue and rehabilitation.

Parallel to this, the system forwards the child's case details from D1 to the Verify Child Status Process (2.2), where the police department reviews the case. Police verify whether the child is already reported missing, abandoned, or in need of protection. After verification, the official status is recorded and stored in the Verified Cases Database (D2). This ensures that only confirmed and legitimate cases move forward in the process, maintaining legal compliance and child safety standards. Once the police verification is complete, the system transitions into the volunteer-related workflow. The NGO initiates the Register Volunteer Process (4.2) by selecting volunteers or requesting additional support. The volunteer details are stored in the Volunteer Database (D3), which serves as a reference for matching skills and availability. The system then checks the NGO's availability and schedule through the Check NGO Schedule Process (4.3), which retrieves data from the NGO Schedule Database (D4). This ensures that the timing and resources align with the requirements of the rescue operation.

Finally, the Assign Volunteer Process (4.4) integrates information from police verification, NGO availability, and volunteer records. The system selects the most suitable volunteer and generates notification alerts for both NGO staff and volunteers. These notifications include child details, location, and assigned responsibilities, enabling timely coordination for rescue and rehabilitation.

Overall, the DFD Level-2 demonstrates a clear, well-structured flow of information across multiple processes, ensuring that each step—from child reporting to

volunteer assignment—operates smoothly. Through efficient data storage, verification, and communication, the Bal Vatsalya Marga System enhances child safety, enables rapid response, and strengthens collaboration between common people, police authorities, NGOs, and volunteers.

3. CONCLUSIONS

The Bal Vatsalya Marga System successfully addresses the critical challenges associated with reporting, verifying, and assisting orphaned or missing children. Through streamlined data collection, police verification, NGO coordination, and volunteer assignment, the system provides a structured and reliable workflow that enhances the overall efficiency of child protection services. The integration of digital verification, secure databases, and automated notifications significantly improves the response time and increases the chances of timely rescue and rehabilitation.

The project demonstrates how technology can be used responsibly to support social welfare initiatives. By simplifying the reporting process for common people and enhancing coordination among organizations, the system ensures that vulnerable children receive help quickly and effectively. Its modular design, intuitive interface, and strong database support make it a sustainable and scalable solution for child welfare operations.

Looking ahead, the system can be expanded with additional features such as GPS-based location tracking, AI-based child face matching, mobile application support, and real-time dashboards for authorities. Integration with national and state-level child databases could further strengthen the verification process. With continued enhancements, the Bal Vatsalya Marga System has the potential to become a powerful nationwide platform for ensuring child safety, rehabilitation, and long-term support.

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