## **APPLIED MECHANICS** MAGAZINE **ABHIYANTRIKI**



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## **Major Events**

SAHYOG'24- Industry-Academia meet

#### **Achievements**

**INSDAG-National** Champions, Gold medals, Geo-vishelshan, Quiz whiz

## **Faculty** achievements

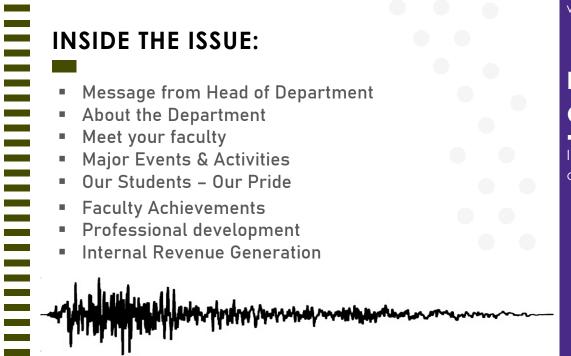
PhD's conferred, Research work in media.

## Internal Revenue Generation

IRG from testing and consultancy services.

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- Internal Revenue Generation



# L. D. COLLEGE OF ENGINEERING, AHMEDABAD APPLIED MECHANICS DEPARTMENT

#### VISION

To mould the students into professionals abreast with latest skills, Innovative Research Orientation to enhance the Knowledge of Faculty Members and Academic Infrastructure to Excellence, and to serve the Society with Novel Technology.

#### MISSION

- 1. To combine quality education with career focused learning and the application of knowledge.
- 2. To provide ambience of research and innovation.
- 3. To provide the best resources along with expertise of faculty.
- 4. To inculcate professional ethics and instill the sense of responsibility towards the society.
- 5. To create opportunities for industry-academia collaboration in order to explore the new avenues in the field of civil engineering.

## Message from Head of Department



It gives us immense pleasure to present the third issue of our in-house departmental magazine, *Abhiyantriki* – a publication by the Department of Applied Mechanics. The department publishes the magazine to keep its stakeholders up to date on all relevant information. The department believes that through this magazine, each student who enters the Civil Engineering Department of the L. D. College of Engineering can use this magazine to get acquainted with the department, faculty members, the wide range of activities we conduct, and the accomplishments of their peers. This annual edition also provides a valuable opportunity to reconnect with our distinguished alumni and industry partners, further strengthening industry-academia collaboration.

Students are encouraged to participate in a variety of technical and cultural events, earning a place in this annual edition. We hope this platform motivates both students and faculty members to strive for excellence and showcase their talents.

We warmly invite all faculty members and students to contribute to Abhiyantriki through their meaningful achievements and authentic activities – whether professional, academic, curricular, or extracurricular. We also welcome your suggestions and recommendations, so we may continue to improve and deliver even more enriching editions in the years ahead.

#### ABOUT THE DEPARTMENT

The Department of Applied Mechanics is a vital offshoot of Civil Engineering Program at L. D. College of Engineering. Applied Mechanics department has a distinguished and technically well-versed faculty imbued with a sense of commitment and sincerity.

Due to a minor alteration in the department's organizational chart owing to transfers, promotions and retirement, there are now 16 faculty members overall. On March 30, 25th, Prof. M. G. Vanza , a seasoned faculty member, retired from the department. Due to promotions and transfers, the department also saw a significant change in the faculty. Prof. D. R. Tarachandani was transferred to GEC, Modasa, and Prof. Dr. M. V. Shah was promoted and moved to GEC, Bharuch, as a Class-1 Associate Professor. Along with Prof. Dr. Yamini J. Patel, who was promoted to Class-1 Associate Professor in the Department of Applied Mechanics, Prof. Binita A. Vyas was transferred from GEC, Modasa to LDCE.

Two faculty members in the department, Professors Poonam I. Modi and Yogesh J. Chauhan, received their PhDs in Civil Engineering from Gujarat Technological University this year. Their research focuses on Ocean Engineering and Sustainable Construction Materials. Five of the department's sixteen faculty members currently hold doctorates in philosophy, while the remaining faculty members hold master's degrees.

During this term, the department successfully organized "SAHYOG 2024: An Industry-Academia Meet," with a fascinating panel discussion serving as the event's main attraction. Prominent industry leaders from top government and private institutions attended SAHYOG 2024.

Applied mechanics students brought honors to the department on 8.2.2025 when they received gold medals at the 30<sup>th</sup> GICEA Gold Medal Ceremony 2025. Students once again placed second runner-up in the INSDAG (Institute for Steel Development and Growth)-organized National Level Prestigious Civil Awards Competition this year.

#### **MEET YOUR FACULTY**



Name: Major Dr. C. S. Sanghvi Designation: Head of Department

Qualification: PhD (Civil Engg. – Earthquake Engineering) SVNIT, Surat

E mail: head applied@ldce.ac.in

Research interest: Earthquake Engineering, Structural Engineering

Name: Dr. Gopal M. Tank Designation: Professor

Qualification: PhD (Civil Engg. – Earthquake Engineering) IIT Roorkee

E mail: <a href="mailto:gopaltank@ldce.ac.in">gopaltank@ldce.ac.in</a>

Research interest: Earthquake Engineering, Structural Engineering





Name: Prof. Binita A. Vyas

**Designation: Associate Professor** 

Qualification: M.E. Civil (CASAD), Gujarat University

E mail: binita.vyas@ldce.ac.in

Research Interest: Concrete Technology, Structural Analysis

Name: Prof. P. J. Mehta

**Designation: Associate Professor** 

Qualification: M.E. Civil (CASAD), Gujarat University

E mail: mehta.priti67@gmail.com

Research Interest: Structural Analysis and Design, Geotechnical





Name: Prof. Dr. Yamini J. Patel Designation: Associate Professor

Qualification: Phd (Civil Engineering), Gujarat Technological University

E mail: yamini.patel@ldce.ac.in

Research Interest: Structural Analysis and Design, Concrete Technology,

**Retrofitting of Structures** 

Name: Prof. A. J. Shah

**Designation: Assistant Professor** 

Qualification: M.E. Civil (CASAD), Gujarat University

E mail: alpa.jogin@ldce.ac.in

Research Interest: Structural Analysis and Design, Geotechnical

**Engineering** 





Name: Prof. D. H. Raval

**Designation: Assistant Professor** 

Qualification: M.E. (Structural Engineering), Mumbai University

E mail: <u>deeparaval@ldce.ac.in</u>

Research Interest: Composites, Finite Element Analysis



**Designation: Assistant Professor** 

Qualification: M.E. Civil (CASAD), Gujarat University

E mail: <u>ashwinghansora@ldce.ac.in</u>

**Research Interest: Structures** 





Name: Prof. K. A. Parmar

**Designation: Assistant Professor** 

Qualification: M.E. Civil (CASAD), GTU, Ahmedabad

E mail: <u>kaparmar.19@gmail.com</u>

Research Interest: Design of concrete & Steel structures, Concrete

technology

Name: Prof. U. K. Patel

**Designation: Assistant Professor** 

Qualification: M.E. Civil (GEO), GTU, Ahmedabad

E mail: ushapatel1964@qmail.com

Research Interest: Geo-technical Engineering



Name: Prof. C. D. Patel

**Designation: Assistant Professor** 

Qualification: M.E (Civil – CASAD), Gujarat University

E mail: <a href="mailto:cdpatel.casad@ldce.ac.in">cdpatel.casad@ldce.ac.in</a>

Research Interest: Design of Reinforced Concrete and Steel Structures





Name: Prof. Dr. Poonam I. Modi Designation: Assistant Professor

Qualification: PhD (Civil Engineering) Gujarat Technological University

E mail: poonammodi@ldce.ac.in

Research Interest: Concrete technology, Conditional Assessment and repairs & strengthening of Concrete structures, Design of reinforced

concrete structures

Name: Prof. P. H. Andharia

**Designation: Assistant Professor** 

Qualification: M.E. (Structural Engineering), Sardar Patel University,

Vallabh Vidyanagar

E mail: <a href="mailto:payal.andharia@ldce.ac.in">payal.andharia@ldce.ac.in</a>

Research Interest: Structural Analysis, Design of R.C.C. Structures,

Design of Steel structures.





Name: Prof.B.R.Patel

**Designation: Assistant Professor** 

Qualification: M.Tech. (Structural Engineering), Sardar Vallabhbhai

National Institute of Technology, Surat

E mail: bansalcivil89@ldce.ac.in

Research Interest: Concrete Technology, Design of R.C. & Steel

Name: Prof. S. R. Singh

**Designation: Assistant Professor** 

Qualification: M.Tech. (Geotechnical Engineering), Sardar Vallabhbhai

National Institute of Technology, Surat

E mail: <a href="mailto:srsingh@ldce.ac.in">srsingh@ldce.ac.in</a>

Research Interest: Geotechnical Engineering, Foundation Engineering,

**Ground Improvement Techniques.** 





Name: Prof. Dr. Y. J. Chauhan Designation: Assistant Professor

Qualification: PhD (Civil Engineering), Gujarat Technological University

E mail: vic@ldce.ac.in

Research Interest: Ocean engineering, Earthquake Engineering, Bridge

Engineering, Special Concrete, Structural Health Assessment

#### **Major Events & Activities**

## **Technical workshop/ Events**

## **# Expert Lectures**

An expert session on the "Indian Philosophical System" was conducted for the newly

admitted students of the 2024 batch from Civil and Mechanical Engineering on July 12, 2024. The talk, delivered by Dr. Bhoomi Vamja, Assistant Professor at Bhavan's College, GU, was well-received by the students and provided valuable insights into the richness of the Indian Philosophical system. Organized as part of the Induction Program for new students in alignment with the NEP, the session was coordinated by Prof. Poonam I. Modi and Prof. Mahendra Patil.



Expert session on "GDCR (General Development Control Regulations) and RERA (Real Estate Regulatory Authority) was arranged for students of B.E. Civil SemV, VII and M.E. Civil (Structural and Geotechnical engineering) on 3rd August'2024 at Vishveshwarya Hall of Applied Mechanics Department. Both the expert talks were arranged with an aim to apprise the audience of the practical application of GDCR guidelines, zoning regulations, and sustainable urban design principles and practical applications of RERA act.

The GDCR guidelines talk was delivered by Shri Jay Dhandukiya (Town Development Officer) and his team comprising of Mr. Minesh Tripathi (Assistant Town Development Officer), Mr. Darshan Sanghvi (Town Development Inspector). The talks were concluded with a goog round of questions from students. The session was well coordinated by Major Dr. C. S. Sanghvi, Prof. Ashwin G. Hansora and Prof. Poonam I. Modi.



Applied Mechanics department under the aegis of the ICI and IEI, student chapter at AMD, LDCE. The talk was delivered by KUNAL TALSANIYA (Sr. Associate, Structure, Ducon Consultants Pvt. Ltd.) on 28.2.25 in Aryabhatt hall in LDCE. The lecture was well attended by students of B.E and M.E Civil and faculty members. The department of Applied Mechanics would like to extend a heartfelt gratitude to Mr. Kunal Talsaniya for sparing his precious time and helping the students to get conversant with the nuances of Ductile detailing of RCC elements in accordance with IS 13920:2016. Each clause was explained elaborately yet lucidly thereby giving the students insights into the underlying theory of clause and relevant requirements.



In addition, Mr. Kunal emphasized the significance of accurate detailing in structures, as it can lead to the development of structural faults that can ultimately lead to catastrophic failure. Mr. Kunal's interactive and insightful discourse captivated the entire audience. The session was concluded by a short Quiz based on the Lecture. The first 3 winners were felicitated by Mr. Kunal Talsaniya. The session was coordinated by Prof. Kamini A. Parmar, Prof. Dr. Poonam I. Modi & Prof. Bansal R. Patel.

■ L. D. College of Engineering in Association with Sumitomo Rubber Industries Ltd. (Japan) has organized an Online Technical Presentation (Expert Lecture) on 13/03/2025 1:30 p.m. on topic of Sumitomo Ultra High Damping Technology: Seismic Devices - Building Dampers & Ground Isolators.

The speaker Dr. Andri Setiawan is a Postdoctoral Researcher at Universitat Politecnica de Valencia

Applied Mechanics Department
L. D. College of Engineering, Ahmedabad
in Association with Sumition Rubber Industries, Ltd.
has organized an Expert Lecture on

SUMITOMO UTRA HIGH DAMPING TECHNOLOGY
Seismic Devices – Building Dampers & Ground Isolators

Date: 13/03/2025

Time: 1.30 p.m. (Indian Standard Time)

Patron
Dr. Nilay N. Bhuptani
Principal
L. D. College of Engineering
Ahmedabad

Applied Mechanics Department
L. D. College of Engineering
Ahmedabad

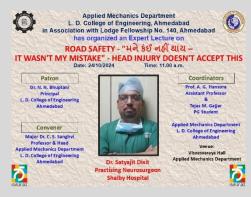
Applied Mechanics Department
L. D. College of Engineering
Ahmedabad

Ornine
Dr. Andri Setiawan
Postdoctoral Researcher
Universitat Politecnica de Valencia (Spain)

Global Chief Technical Advisor, Sumitomo Global Engineering Team

(UPV) having expertise in Building Dampers & Ground Isolators and is Global Chief Technical Advisor (Based in Spain) for Sumitomo.

In association with Lodge Fellowship No. 140, Ahmedabad, the department organized an Expert lecture on "Road Safety" on 24.10.24. The session was delivered by Dr.Satyajit Dixit (Practising Neurosurgeon -Shalby Hospital). Dr.Dixit through his presentation gave crucial insights into the topic and motivated the student fraternity to observe due precautions while driving/riding in order to avoid any critical mishaps that can be life endangering.



## # GIDM workshop

Applied Mechanics department of L. D. College of Engineering in association with Gujarat Institute of Disaster Management (GIDM, Gandhinagar) organized a 3-day workshop on "Disaster Management" under the aegis of MoU with GIDM. The workshop was meticulously organized and featured a combination of expert-led sessions and hands-on exercises that addressed critical disaster management topics. The expert sessions addressed a wide range of subjects, including the fundamentals of disaster management, the most recent developments in disaster mapping and mitigation, the potential for a career in disaster management, and the application of GIS and GPS in disaster mapping.

The practical session provided a clear explanation of fire extinguishing techniques, fire classifications, and practical experience using various fire extinguishers and techniques to put out specific fire types. Students gained excellent insights into the creation of the LDCE Disaster Mitigation Plan from the practical session as well. The workshop took place on March 5<sup>th</sup>, 6<sup>th</sup>, and 7<sup>th</sup>, 2025. Major Dr. C. S. Sanghvi served as the convener, while Prof. Dr. Poonam I. Modi, Prof. Bansal R. Patel, and Prof. Shalini R. Singh coordinated this well-curated workshop.



## **# Technical Day**

#### ❖ The Royal Charter Day

The Royal Charter day was celebrated on 9th September'24 on the theme "India's future: The rise of smart townships. This day was jointly organized by The Institution of Engineers (India) Gujarat State Centre and L. D. College of Engineering, Ahmedabad.

The celebration was done in august presence of Shri N. K. Patel – President, ITPI, Chairman and MD, Sun Builders as Chief Guest of the function. The Guest of the Honor of the function was Dr. Vatsal Patel -Urban Planner, Past president of GICEA. Shri N. K. Patel gave an interesting theme related talk



#### ❖ World Standards Day

On the occasion of the World Standards Day, an expert session on topic "Refreshing

Applied Mechanics Department Fundamentals of IS 456:2000" was arranged on

14.10.24.

Applied Mechanics Department
L. D. College of Engineering, Ahmedabad
An Expert Lecture on

Refreshing Fundamentals of IS 456: 2000
On the Occasion of World Standards Day 2024
Date: 14/10/2024 Time: 11,00 a.m. To 1.00 pm.

Patron
Dr. N. N. Bhuptani
Principal
L. D. College of Engineering
Ahmedabad

Convener
Major Dr. C. S. Sanghul
Professor & Head
Applied Mechanics Department
L. D. College of Engineering
Ahmedabad

Mr. Bhavin Shah
Founder & CED
SQVe Consultants

The expert talk was delivered by eminent Structural Engineer and Consultant Mr. Bhavin Shah (Founder and CEO, SQVe consultants). The lecture was attended by students of B.E. Sem V and M.E. (Structure and Geotech). The session was coordinated by Prof. A. G. Hansora and Prof. A. J. Shah under the guideship of Major Dr. C. S. Sanghvi.

#### **# STUDENT'S CHAPTER**

## **Bureau of Indian Standards (BIS)**

BIS Technical Sessions on the following topics such as (1)Standardization (2) Formulation Process and Challenges (3) World of Standards was arranged about 200 students from different departments of LDCE.

The session was delivered by the Expert: Mr. Nitish Kumar Verma, Joint Director, BIS, on 9th August'2024 at Vishvakarma Hall,



Civil Engineering Department. The entire programme was well coordinated by Prof.Ashwin G. Hansora.

## # INDUSTRIAL VISITS

## L&T Skill centre on 3rd August'24





## Visit to IIT-GN on 9th August 2024





## L&T Skill centre on 3<sup>rd</sup> and 4<sup>th</sup> October 2024







## KBM Soil Laboratory on 21st March 2025



#### # SAHYOG'24

The Civil and Applied Mechanics departments collaborated to organize *SAHYOG'2024* on October 19, 2024. SAHYOG is organized each year with the noble intention of fostering and strengthening our Industry-Academia collaboration, taking into account the fact that Academia alone cannot hone students' skill-sets to make them Industry ready, and we continue to look forward to such positive interactions.

This year, SAHYOG was convened in the form of a panel discussion with the main objective of developing a better understanding of how we can shape our internship program so that it can help us develop our students into competent professionals by providing them with appropriate industry exposure.

The panel comprised of eminent Industry stalwarts such as Anal Sheth (Head-Research and Development – in India's leading precast concrete organization) Fuji Silvertech Concrete Company Pvt. Ltd, Apurva Soni (Proprietor - KHA Designs, Ahmedabad), Rohit Solanki (Director, Aartav Engineering Pvt. Ltd), Jay Patel (Assistant Engineer, Road & Bridge Department, Ahmedabad), Kirit B. Nasit Assistant General Manager – Highways at Infinite Civil Solutions Pvt. Ltd. Ahmedabad ), Mr. Keval R. Parikh (Director of RJP Infrastructure Private Limited, Ahmedabad and Aditya Pratap Singh (Founder and Managing Partner – Tevoren Technologies LLP).



#### Our Students - Our Pride

## **# National Champions**

In the Grand Finale of National Level Prestigious Civil Awards Competition organised by INSDAG (Institute for Steel Development and Growth) for the year 2024-25, One team of Final Year Civil/Structural Engineering Students under the mentorship of Prof. C. D. Patel from L. D. College of Engineering bagged the second runners up position.

The participating teams had to provide an Innovative Structural Steel Design for Steel Intensive Concourse over Railway Track & Platform and present the same theme in the final round. The team LDCE comprising of Tejas Gajjar, Janvi Chotaliya, Harshvi and Keval Prajapati and their mentor Prof. C. D. Patel, secured the position of 3B and has been awarded with cash prize of INR 20,000. In the 16 teams which qualified for the final



round of competition including the premium engineering institutes like IITs and NITs, the team of L. D. College of Engineering emerged victorious.

#### # Gold medallist

Students of B.E and M.E. (Civil Engineering) were conferred with Gold medals on 8.2.2025 in the 30th GICEA Gold Medal Ceremony 2025, organized by The Gujarat Institute of Civil Engineers and Architects (GICEA). Students were awarded Gold medal for their excellent academic performance in different subjects pursued by them.



## # Aced the technical competition

- Priya Chaudhari and Deep Mehta, students of B.E.Sem VII (Civil Engineering) bagged 2nd
   Prize in All India Level Geotechnical competition entitled "GEOVISLESHANA 2024" organized
   by Indian Geotechnical Society.
- Jay Gandhi (B.E. Sem VII- Civil Engineering), secured first position in "Quiz Whiz" competition organized by Nirma University. He was conferred with Certificate of Participation and prize money.

## **Faculty Achievements**

- Prof. Yogesh J. Chauhan successfully completed PhD in Civil Engineering titled "Dynamic Analyses of Offshore Triceratops subjected to Hurricane-driven Metocean conditions" under the supervision of Dr. B. J. Shah (Principal, GEC Modasa) and Dr. Srinivasan Chandrasekaran (Professor, IIT Madras).
- Prof. Yogesh J. Chauhan Reviewed 2 research articles for Ocean Engineering, Elsevier, one of the top ranking journals in the domain of Ocean Engineering, Web of Science and Scopus Indexed Q1 Journal.
- Prof. Yogesh J. Chauhan Reviewed 3 research articles for International Journals of Steel Structures, Springer, the official journal of the Korean Society of Steel Construction (KSSC), Web of Science and Scopus Indexed Q2 Journal..
- Prof. Poonam I. Modi successfully completed PhD in Civil Engineering entitled "Development of Sustainable Construction Unit using Sandstone Dust" from Gujarat Technological University under the guideship of Dr.Rajul K. Gajjar (Vice Chancellor, GTU).
- Prof. Dr. Yogesh J. Chauhan delivered an expert session in a one Day workshop on "Structural Analysis and Design using CSI Etabs" at GTU. Over 60 participants attended the workshop.
- Prof. Dr. Major C. S. Sanghvi delivered an Expert session on "Innovations in Earthquake resistant Building design and Construction on 12.3.2025 at Indus University.
- Prof. Dr. Poonam I. Modi delivered an expert talk on "Diagnosis of Distress in RCC & Masonry" on 18th March'2025, in 2day residential training program organized by GIDM on "Earthquake Risk Reduction in Housing Schemes.

Prof. Dr. Manish V Shah's research work on "Usage of river bacteria to intercept evaporation of water", was featured in leading newspaper. The clip highlights the crucial aspects of research including a mention of laboratory scale experimental set-up developed by the team to segregate bacteria from water and soil.



## **Professional Development**

- Prof. Alpa. J. Shah successfully completed a Faculty development programme in an Online mode conducted by AICTE on Incorporating Universal Human Values in Education.
- Prof. Chintan D. Patel successfully completed a two weeks Industry training at Metro Rail
   Project Sites under Ranjit Buildcon Ltd., from 8<sup>th</sup> July 2024 to 20<sup>th</sup> July 2024.
- Prof. Dr. Poonam I. Modi, successfully completed a two weeks Industry training at SCC Infrastructure Pvt. Ltd., from 24<sup>th</sup> June 2024 to 6<sup>th</sup> July 2024.
- Prof. Bansal R. Patel, successfully completed a two weeks Industry training at Metro Rail
   Project Sites under Ranjit Buildcon Ltd., from 8<sup>th</sup> July 2024 to 20<sup>th</sup> July 2024.
- Prof. Dr. Yogesh J. Chauhan, successfully completed a two weeks Industry training at NCC Ltd., from 24<sup>th</sup> June 2024 to 6<sup>th</sup> July 2024.
- Prof. Dr. Yogesh J. Chauhan, successfully completed a two weeks Industry training at MaRS Planning Engineering Services Pvt. Ltd., from 15<sup>th</sup> July 2024 to 28<sup>th</sup> July 2024.
- Prof. Payal H. Andharia, successfully completed a two weeks Industry training at Kalthia Engineering and Construction Limited., from 15<sup>th</sup> July 2024 to 27<sup>th</sup> July 2024.

## # Paper Publications

 Prof. D.H.Raval published research paper entitled "Time History Analysis of Hybrid-Outrigger System in Tall Buildings" in IJSRD - International Journal for Scientific Research & Development.

## **Internal Revenue Generation (IRG)**

The faculty members of the department are constantly involved in carrying out a number of Testing and Consultancy works throughout the year with a large clientele base. The revenue worth Rs 65.21 lacs and Rs.34.89 lacs was accrued from testing and consultancy works in the financial year 2023-24 and 2024-25.



## STUDENT'S TEAM



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UNNATI PARMAR 230283106020 B.E.SEM VI



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**YEARS OF LDCE** 

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MAJOR DR. C. S. SANGHVI
HEAD
APPLIED MECHANICS DEPT
LDCE, AHMEDABAD

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PROFESSOR
APPLIED MECHANICS DEPT.
LDCE, AHMEDABAD

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