Under the aegis of Vijayam Educational Trust
CATALYST COLLEGE
(A Unit of CIMAGE Group of Institutions)
Institution approved by Education Department, Government of Bihar, Affiliated to Patliputra University, Patna

Ref: CC/WRSP-NOT/22/3236

Date: 27-Aug-2022

NOTICE

This is to inform all the Students that a workshop on Building the Future: PC Assembly for Entrepreneurs in the Tech Industry will be organized on 12.9.2022 from 9:30 AM to 5:30 PM in the auditorium of Catalyst College.

The workshop is completely free, and no money will be charged for the Training or Certification.

Interested students are instructed to meet the Activity In-Charge / Class Coordinator for more details and their registration.

By the order of

Principal
CATALYST COLLEGE
Plot No.- C-16(P) Patliputra Industrial Area
Patna-na 800013

Principal

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Patliputra, Patna- 800013
(+91) 7250767676
megha@cimage.in

Date:12-09-2022

Workshop Title:

Building the Future: PC Assembly for Entrepreneurs in the Tech Industry

Number of Students Participated: 57

Overview:

This hands-on workshop is designed for entrepreneurs, startup founders, and tech enthusiasts who want to dive into the world of PC assembly and understand how building custom PCs can benefit their business in the tech industry. Whether you're looking to enhance your knowledge of computer hardware, design custom systems for clients, or build your own workstations or servers, this workshop will give you the technical skills and entrepreneurial insights to leverage PC assembly in your business ventures.

In the rapidly growing tech industry, a strong understanding of hardware and custom system building can set your business apart, whether you're developing software, AI solutions, or gaming products. From performance optimization to cost-effectiveness, building your own PCs can give you more flexibility and better control over the technology you work with.

This workshop will focus on the fundamentals of PC assembly, providing participants with the skills to assemble and upgrade computers, choose the right hardware components, and troubleshoot common issues. Additionally, we'll explore how custom PC builds can be a valuable service for your business, whether for personal use, clients, or enterprise-level solutions.

Model 1: Introduction to PC Assembly and Core Components

Session 1: The Basics of PC Hardware

- Introduction to PC Components: Overview of the essential hardware components that make up a PC:
    - Central Processing Unit (CPU): The brain of the computer. Discussing performance benchmarks and how to choose the right CPU.

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- Graphics Processing Unit (GPU): Understanding the role of a GPU in gaming, design, and machine learning.
- Motherboard: The backbone of the computer that connects all components together.
- Memory (RAM): Why RAM is crucial for performance, particularly in multitasking and high-performance tasks.
- Storage: Differences between Hard Disk Drives (HDDs), Solid State Drives (SSDs), and how to choose the right storage for speed vs. capacity.
- Power Supply Unit (PSU): How to determine the right wattage and choose reliable power supplies.
- Cooling Solutions: The importance of cooling (fans, liquid cooling, thermal paste) and keeping your system running efficiently.

Session 2: Selecting the Right Hardware for Your Business

- Choosing the Right Components for Different Applications:
  - For Software Development: What specs to prioritize, including CPU, RAM, and storage.
  - For Gaming or Content Creation: Understanding the importance of high-performance GPUs, fast storage, and multi-core processors.
  - For Machine Learning and AI: Hardware considerations for training models, including GPUs with CUDA cores, large amounts of RAM, and fast NVMe SSDs.
  - For Small Business Servers: How to choose components for building servers or workstations that are both cost-effective and reliable.

Session 3: The PC Assembly Process

- Step-by-Step Guide to Assembling Your PC:
  - Preparing the Workspace: Organizing tools and components, setting up a clean environment to prevent static damage.
  - Installing the CPU: How to safely install and secure a CPU on the motherboard.
  - RAM and Storage Installation: Step-by-step instructions for inserting RAM sticks and SSDs/HDDs.

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- Mounting the Motherboard: Attaching the motherboard to the case and connecting key components.
- Installing the GPU: How to slot the GPU correctly and connect it to the power supply.
- Wiring the PSU: Connecting cables from the PSU to the motherboard, GPU, and storage devices.
- Testing the System: Powering up the system to check if all components are functioning correctly.

Model 2: Optimizing and Troubleshooting Your Build

Session 1: Optimizing Your PC for Performance

- Understanding Performance Needs: Choosing components based on the workload (gaming, content creation, AI, etc.).
- Overclocking Basics: Introduction to overclocking CPU and GPU for improved performance in tasks like gaming and video rendering.
- Cooling and Thermal Management: How to monitor temperatures, adjust fan speeds, and prevent overheating. Choosing between air cooling and liquid cooling systems.
- Upgrading Your System: When and how to upgrade components for better performance—installing more RAM, upgrading to SSDs, and optimizing GPU setups.

Session 2: Troubleshooting Common Issues

- Common PC Assembly Issues:
  - System not turning on: Diagnosing power supply, motherboard, or connection problems.
  - No display output: Troubleshooting GPU, monitor, and cable issues.
  - Overheating problems: Identifying causes of overheating and how to fix them.
  - Boot errors: How to identify and fix common BIOS or operating system boot issues.

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- Diagnostics Tools and Techniques: Using software tools to stress-test components, monitor system health, and detect issues.
- System Maintenance: How to keep systems running smoothly by performing regular updates, cleaning dust, and replacing aging components.

Session 3: Building a Business Around PC Assembly

- Entrepreneurial Opportunities in PC Assembly:
    - Custom PC Builds for Clients: How to build and sell tailored systems for gamers, content creators, and businesses.
    - PC Repair and Upgrades: Offering services such as hardware repairs, upgrades, and troubleshooting.
    - Enterprise Solutions: How to approach building workstations and servers for companies that need high-performance computing power.
- Creating a Service-based Business:
    - Marketing and Branding: How to promote your custom PC business through online marketing, social media, and partnerships.
    - Pricing and Cost Management: How to price your PC builds and repair services for profitability while staying competitive.
    - Customer Service: Building relationships with clients, offering warranties, and managing return and repair services.

Model 3: Scaling Your Business and Future-Proofing

Session 1: Scalability in PC Assembly Business

- Streamlining Operations: Using tools like inventory management systems, billing platforms, and project management software to scale your PC assembly services.
- Building a Team: Hiring and training technicians to help with assembly, repair, and customer service as your business grows.
- Automation in Assembly: Exploring how automation and technology (e.g., robotic arms for assembly or AI for testing systems) can improve efficiency and lower costs in the long run.

Session 2: Emerging Trends in Hardware and PC Customization

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- Trends in Gaming and Content Creation Hardware: New technologies and performance demands in gaming, VR/AR, and high-end graphics processing.
- AI and Machine Learning Hardware Needs: The growing demand for GPUs and specialized hardware like Tensor Processing Units (TPUs) for machine learning workloads.

Session 3: Building a Sustainable Future

- Long-Term Business Growth: How to build a brand that's known for quality, reliability, and innovation.
- The Future of Custom PC Builds: How to stay ahead of the competition by offering unique value propositions like high-performance systems for blockchain, AI, or VR/AR.
- Client Retention Strategies: Offering maintenance services, extended

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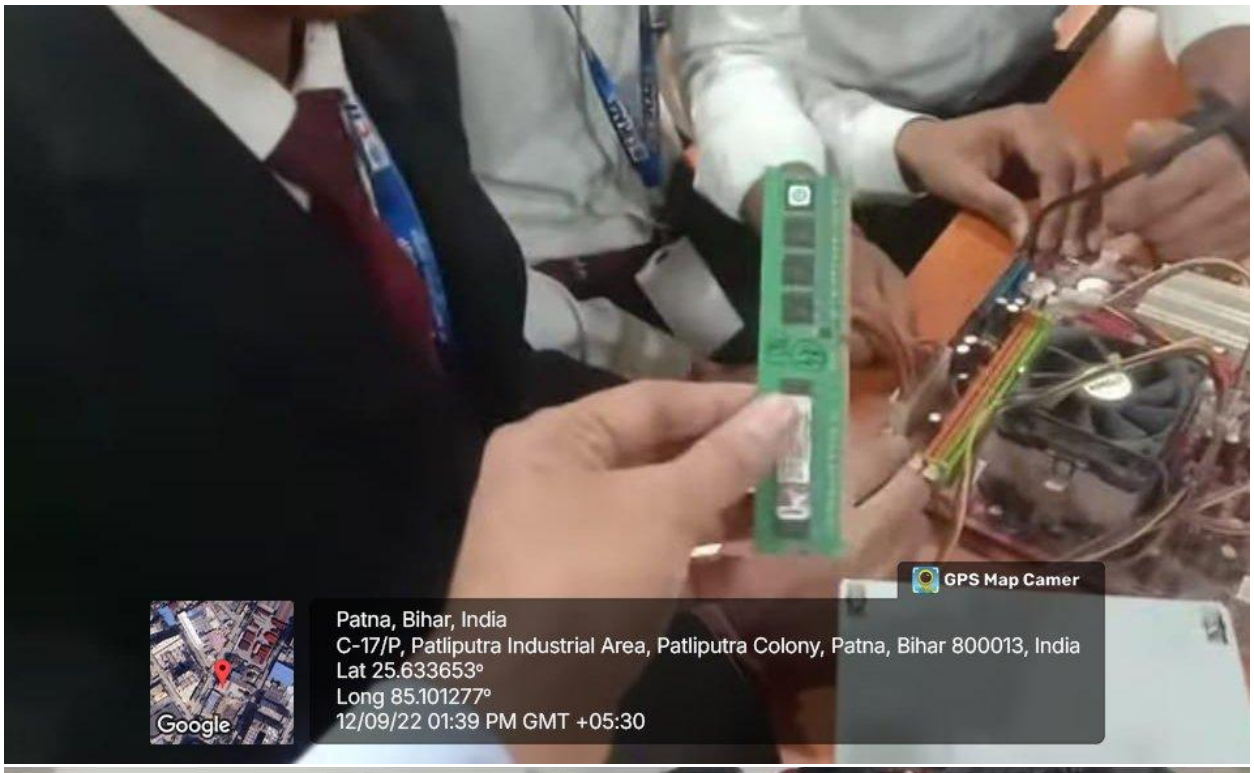
Date:-12/09/22



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Registration

For Workshops/Seminars/Conferences during Academic Year 2021-2022

Building the Future: PC Assembly for Entrepreneurs in the Tech Industry

(12 September 2022)

S. No.	ID	Name of the student	Student's Signature
1	445-6981	Aditya Kumar Sahni	Aditya Kr. Sahni
2	445-6762	Akshay Verma	Akshay Verma
3	445-6915	Aman Kumar Gupta	A. K. Gupta.
4	445-7272	Amit Kumar Thakur	Amit
5	445-7443	Ashutosh Kumar	Ashutosh Kr.
6	445-6725	Bipul Kumar	Bipul Kr.
7	445-6767	Gautam Kumar Solanki	Gautam
8	445-6951	Golu Kumar	Golu kr
9	445-6928	Harsh Raj	Harsh Raj
10	445-6937	Kamya Rani	Kamya Rani
11	445-6939	Karishma Kumari	Komal kr
12	445-6750	Komal Kumari	K. Kri
13	445-7390	Krishn Mohan Kumar	Krish Mohan kr
14	445-7250	Manish Kumar	Manish Kr.
15	445-6977	Nur Alam	Nur alam
16	445-6862	Prakash Raj	prakash
17	445-6853	Prashant Kumar	P. Kumar
18	445-6974	Prince Kumar Singh	Price kr Si
19	445-6730	Raghav Raman Choudhary	Raghav R.C
20	445-6747	Ranjeet Kumar Yadav	Ranjeet kr
21	445-6733	Raunak Rani	Raunak Rani
22	445-6854	Sanjeev Kumar	Sanjeev Ks
23	445-7423	Satish Kumar	Satish
24	445-6883	Saurav Kumar	Saurav
25	445-6761	Shankar Kumar	Shankar kumar
26	445-6993	Shiv Jee Kumar Yadav	Shiv Jee.
27	445-6728	Shivam Shekhr	Shivam Shekher
28	445-7029	Sonal Kumar Singh	S. K. Singh
29	445-6770	Subham Kumar	Shubham
30	445-6742	Subham Shankar	Subham Shank.
31	445-7604	Tanuja	Tanuja
32	445-6991	Ujjval Kumar Verma	U. K. Verma

33	445-7001	Vikash Kumar	Vikash Kr.
34	445-7023	Vikash Kumar	Vikash Kr
35	445-6739	Vinayak Gupta	Vinayak
36	445-6759	Vishal Pandey	Vishal Pandey.
37	45-7432	Bolbam Kumar	Bolbam kum
38	445-6741	Kanish Kumar	Kanish Raj
39	445-6948	Manish Raj	manish Raj.
40	445-6737	Manisha Kumari	Manisha kumari
41	445-6933	Ravnak Kumar	Ravnak kuma
42	445-7275	Aaseen Alam	Aaseen Alam
43	445-7343	Akshat Raj	Akshat Raj.
44	445-7027	Anish Raj	Anish Raj
45	445-7345	Avinash Kumar	Avinash
46	445-7384	Deeplal Ram	Deeplal Ra
47	445-7392	Kajal Kumari	Kajal Kr.
48	445-7033	Kajal Kumari	Kajal kuma
49	445-6886	Kamlesh Kumar Singh	Kamlesh Singh
50	445-7377	Kundan Kumar	K. Kumar.
51	445-7039	Manish Kumar	Manish ku
52	445-7483	Md Arbaz Ansari	Md Arbaj
53	445-7252	Md Faizan	Md Faizan
54	445-7430	Mukesh Kumar Jha	M. K. Jha.
55	445-7469	Nitish Kumar	Nitish kuma
56	445-7379	Pankaj Kumar	Pankaj Kr.
57	445-7375	Prashant Kumar	Prashan kun

(Sign.)
Course Coordinator