

HOLIDAYS... FUN TIME ...

Summer holidays are around the corner. Despite the hot sun, we can still have a lot of fun, so vacation is here for a sweet treat. To enhance the child's creativity and innovation for the progressive learning, we have designed a few engaging activities and holiday homework. Kindly encourage your ward to do the following activities to enhance their skills and make learning a joyful experience.

Morning Blessings- Parents can help children to inculcate good habits by doing, Surya Namaskar and encouraging them to greet all elders in the morning.

Being responsible- Spend a week with your elders. Observe their routine. Listen to their childhood memories, incidents from the past and watch their old family albums. This will strengthen the bond between you and your elders. Don't forget to capture them in the form of short videos.

Engage in Hobbies – Explore Interests, Spend time on activities you enjoy, such as sports, music or art.

Adopt a Tree - Encourage your child to adopt a tree in the park around you and make sure that you take care of it daily by watering it. Also, click a picture with it and share it with your class teacher.

Stay Active: Engage in regular exercise, whether through sports, walking, cycling, or home workouts.

Outdoor Activities: Spend time outdoors, enjoying nature through hiking, swimming, or camping.

Helping Others: Do a good deed at least once a week, fostering a sense of community.

Travel and Explore: Visit local museums, parks, or historical sites.

Trips: Plan trips, whether it's a family vacation or day trips to nearby attractions.

Stay Safe: Follow health guidelines, stay hydrated.

Parents can help their ward to memorize their home address and contact numbers

IMPORTANT: Please feel free to contact the class teacher regarding any query.



RUKMANI BIRLA MODERN HIGH SCHOOL

Session 2025-26 SUMMER ASSIGNMENT CLASS XI

Subject	Assignment
English	Investigatory Project:
	As per CBSE syllabus, the students have to prepare an investigatory project(ALS). The
	project file should be on any of the two sub-topics given below:
	Topic: Egyptian Contributions to Modern Civilization
	Project Question:
	How have the innovations and cultural practices of ancient Egypt shaped the
	foundations of modern science, architecture, medicine, and society?
	Guidelines for the Research File:
	1. Cover Page
	Title:
	Student Name, Class, Roll Number:
	Session:
	Submitted to:
	Submitted by:
	Page 2-Acknowledgment
	Page 3-Certificate
	Page 4-Index
	Page 5- Project topic / Question
	Page 6-Objectives of the project
	Page7-Research Analysis
	Project Structure:
	*Introduction
	*Brief overview of ancient Egypt as one of the oldest and most advanced civilizations
	*Core Research Areas (each section should include pictures, explanations, and
	connections to the modern world)
	Suggested sub- topics (Choose any two):
	•
	A. Mummification
	B. Architecture
	C. Writing Systems
	D. Mathematics and Astronomy
	E. Science and Medicine
	F. Religious and Cultural Influence, Superstitions
	G Influence on art, literature, and religion
	* Personal Reflection on the importance of studying ancient civilizations
	*Bibliography
Physics	Project file -
	Investigatory Project:
	As per CBSE syllabus, the students have to prepare an investigatory project. The
	project must be based on some concept of physics of standard class XI. The students

will have to submit a report on the project comprising scientific investigations involving laboratory testing and collecting information from other sources.

Guidelines to be followed:

(a) The Students will get the topic of investigation from the concerned subject teacher. (b) Brief report (Investigation file) Mention following details:

Cover Page

Index

Certificate

Acknowledgement Content:

- 1. Aim (name of investigatory project)
- 2. Apparatus and material used
- 3. Theory (concept, diagram etc.)
- 4. Procedure
- 5. Experiments and Observations
- 6. Result/Conclusion
- 7. Application of project in daily life Bibliography

Some Suggested Topics of investigation:

- 1.To find out how accurate parallax is when determining the distance of stars from the earth.
- 2. To determine the effect of friction of different surface on the distance travelled by vehicle powered by a balloon.
- 3.To find out whether the length, amplitude, or weight of a pendulum affected its period of motion.
- 4.To investigate the effect of angle of launch on range of projectile.

To study Capillary rise (find height for different liquids).

- 5.Rolling of body in inclined plane i.e.to find the time taken to reach bottom for sphere, cylinder, disc, ring, hollow sphere, hollow cylinder (for any three bodies of same mass)
- 6.To investigate the Bernoulli's theorem with simple experiments.
- 7. To study phenomenon of resonance using an open pipe.
- 8.To determine if sound will travel faster in different salinities of water.
- 9. To determine the effects of the temperature of the universe on Black Holes as the universe ages.

Note. Students may select other topics of investigation also but that must be as per cbse physics syllabus.

Chemistry

Investigatory Project- As per C.B.S.E. Guidelines:

Scientific investigations involving research and collecting information from other sources.

Project must cover the following:

- Cover Page
- Index
- Certificate
- Acknowledgement

Objective of Project Content Result Bibliography Few suggested projects: 1. Investigation of foaming capacity of different washing soaps and the effect of addition of sodium carbonate on it. 2. To Study methods of purification of water. 3. To study the acidity of different samples of tea leaves 4. Effect of acids and bases on the tensile strength of fibres. 5. Checking the bacterial contamination in drinking water by testing sulphide ions 6. Determination of the rate of evaporation of different liquids. 7. Study of acidity of various fruits and vegetable juices. 8. Testing the hardness, presence of Iron, Fluoride, Chloride, etc., depending upon the regional variation in drinking water and study of causes of presence of these ions above permissible limit (if any). 9. Preparation of crude paints. 10.Study of the effect of metal coupling on the rusting of Iron. Note. Students may select other topics of investigation also but that must be as per CBSE Chemistry syllabus. **Mathematics** Activity 1 To find the number of subsets of a given set and verify that if a set has n number of elements, then the total number of subsets is 2^n . Activity 2 To verify that for two sets A and B, $n(A \times B) = p q$ and the total number of relations from A to B is 2^{pq} , where n(A) =p and n(B) = qActivity 3 To represent set theoretic operations using venn diagrams. Activity 4 To verify distributive law for the three given non-empty sets A, B and that is $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$. Activity 5 To distinguish between a Relation and a Function. Activity 6 To find the values of sine and cosine functions in second, third and fourth quadrants using their given values in the first quadrant. **INVESTIGATORY PROJECT Biology** 1. As per CBSE guidelines, the students have to prepare an investigatory project on a topic. They have to submit the project file comprising the scientific investigations

done by him//her and the information collected from appropriate sources. The work should be done only on A4 size sheets. 2. Presentation of the project Index Certificate Acknowledgement • Objective of Project Introduction Content Discussion and Conclusion Bibliography 3. Few suggested topics: Sporulation in Fungi Effect of Environmental condition on the rate of transpiration Economically important insects Lung capacity and volume in human. Anthropogenic action deteriorate environment. Effect of environmental factors on growth of plants Deficiency diseases in plants Vital capacity in man **Biomimicry** Hydroponics based vertical farming Malnutrition in India Effect of oil spills in oceans Angina pectoris Effect of the different wavelengths of light on the growth of plants Pollinating agents Comparative study of flowers of different families Human skeleton and joints Sliding filament theory of muscle movement. ABO Blood grouping Geography Complete first two chapters in your practical file. Chapter 1- Introduction to Maps Chapter 2 – Map Scale • Make notes of the chapters taught till date. Read the newspaper on daily basis. Collect information of any three geographical events occurring on the globe. Paste the information and write a gist on each in about 250-500 words. PROJECT WORK **History** Guidelines for History Project Work One Project to be done throughout the session, as per the existing scheme. 1. Steps involved in the conduct of the project: Students may work upon the following lines: • Choose a Title/Topic • Need of the Study, Objective of the Study Hypothesis

• Content -Timeline, Maps, Mind maps, Pictures, etc.

- (Organization of Material/Data Present Material/Data)
- Analyzing the Material/Data for Conclusion
- Draw the Relevant Conclusion
- Bibliography

2. Expected Checklist for the Project Work:

- Introduction of topic/title
- Identifying the causes, events, consequences and/or remedies
- Various stakeholders and effect on each of them
- Advantages and disadvantages of situations or issues identified
- Short-term and long-term implications of strategies suggested during research
- Validity, reliability, appropriateness, and relevance of data used for research work and for presentation in the project file
- Presentation and writing that is succinct and coherent in project file
- Citation of the materials referred to, in the file in footnotes, resources section, bibliography etc.

FEW SUGGESTIVE TOPICS FOR PROJECTS - CLASS XI

- 1. Facets of the Industrialization in sixteenth- eighteenth centuries.
- 2. Crusades: causes; rationale; events; outcomes; Holy Alliance
- 3. Ancient History in depth: Mesopotamia
- 4. Greek Philosophy and City States
- 5. Contributions of Roman Civilization
- 6. The spirit of Renaissance: Manifestation in art; Literature; Sculpture; Influence on Trading Community; Social Fabric;

Philosophy; Political Values; Rational Thinking; Existentialism

- 7. Aspects of Development -South American States / Central American States
- 8. Different schools of thoughts- Realism: Humanism: Romanticism
- 9. Piecing together the past of Genghis Khan
- 10. Myriad Realms of Slavery in ancient, medieval, and modern world
- 11. History of Aborigines America / Australia
- 12.Facets of Modernization China /Japan/Korea

Students to pick any one topic after a thorough discussion with the subject teacher. In the research project, students can go beyond the textbook and explore the world of knowledge. They can conceptualize under the embedded themes. Forms of rubrics are a significant aspect and to be discussed in the classroom itself for clear understanding of concept and for assessment

Business Studies

"Visit to a Handicraft Industry"

The purpose of visiting a Handicraft unit is to understand nature and scope of its business, stake holders involved and other aspects as outlined below:

- (a) Introduction to handicraft
- (b) History of Handicraft
- (c) Strategic initiatives to empower artisan communities
- (d) Vision and Mission

- (e) The raw material and the processes used in the business: People /parties/firms from which they obtain their raw material.
- (f) Processes
- (g) The market, the buyers, the middlemen, and the areas covered.
- (h) The countries to which exports are made.
- (i) Mode of payment to workers, purchasers, etc.
- (j) Working conditions
- (k) Modernization of the process over a period of time
- (1) Facilities, security and training for the staff and workers
- (m) Subsidies available/availed

IMPORTANT INSTRUCTIONS:

The project report will be developed in the following sequence-

- Cover page should contain Title of the project, Student Information, School Name, Subject, Submitted To, Submitted by and Academic year.
- Acknowledgement
- Certificate
- Index
- Content
- Bibliography

Sociology

PROJECT WORK

As per the CBSE guidelines each student has to prepare a research project. The projectmust involve actual first hand research done by the students in close consultation with the teacher. Students can take any topic of their choice emphasizing the importance/effects/role of society.

PREPARATION AND SUBMISSION OF PROJECT REPORT

Each report must fulfill the following requirements:

- 1. The body of the Project Report will be of approximately 15-20 A4/A3 Pagesexcluding additional appendices, questionnaires etc.
- 2. The project report will be written in the student's own hand; though they may include other illustrative material that is not hand written
- 3. The project report will contain the following matter:
- a) Cover page showing project title, student's information, school and session
- b) List of contents
- c) Acknowledgements and preface
- d) Introduction
- e) Rationale Purpose) -The reason for the choice of the subject and its social significance.
- f) Methodology Technique Mention the methodology e.g. questionnaire, case study, ethnographic description

The students may use any method which is appropriate for the topic selected. Detailedsteps and procedures adopted must be given.

g) Presentation of evidence - There must be a major section formally presenting the evidence gathered as a part of the project. This can be in the form of tables, extracts from interviews, reports on case studies or discussion of documentary data (newspapers, articles, magazines, diaries, photographs). However, there should be

value addition by the student and it must not be a simple reproduction of the original material.

- h) Analysis of evidence & conclusions Each project should summarize its conclusions in a separate section. This can be brief but should be clearly and carefully stated. If possible, some suggestions can be given for further enhancement in the areal subject studied. This section can also include a statement describing the limitations of the study.
- i) Bibliography/ Appendix or other supporting material This should include the references to relevant books and other sources used for the study. The appendix will include questionnaires, list of interviews, documents or any other material used in the study.

Accountancy

COMPREHENSIVE PROJECT- Imaginary Business

- Investigatory Project based on "Accounting Process" in a real business situation.
- Students will prepare a Project File (A4 Size and ruled white sheets) to record their work related to the problems attempted by them in the following format:
- Cover Page- First page of the file should describe title of work, identity of student, Name of school and Name of the teacher concerned. The cover page should be design properly.
- Certificate
- Acknowledgement
- Index to indicate columns for title of work, page no., date, teacher's remarks and signature.
- Cover Story (Imaginary- Based on "Sole Proprietorship Firm")
- Transactions (20-25) Financial Year (1 April to 31 March)
- Design and paste accounting vouchers (cash and non-cash voucher) for various financial transactions.
- Journal Entries
- Project File should be neatly handwritten and presentable with page numbers.

Political Science

PROJECT WORK

Rationale

Political Science as a field of study in senior secondary classes enable students to get an exposure to political activities and processes that they are exposed to in everyday life. The study of political science has emerged as a multifaceted discipline, involving a contemporary interdisciplinary approaches and empirical framework, emphasizing more on field work rather than theoretical perceptions. The connect between government and citizen ensures the emergence of an active and reflective citizens and vibrant democracy. CBSE has therefore incorporated project work in Political Science to enable students to extend their interest beyond textbooks and provide them with a platform to gather information, value the decisions made to shape the community and visualise future course of action to be taken to ensure healthy democracy.

Objectives of project work

To enable learners to:

- probe deeper, initiate action and reflect on knowledge and skills acquired during the course of class XI.
- analyse and evaluate real world scenarios using social constructivism, a theory based on observation and scientific study
- become independent and empowered to choose their topic and gather data from a variety of source, investigate varied viewpoints acquired and arrive at logical deductions.
- enquire into, and reflect on, issues independently /in collaboration with others and identify the limitations
- develop 21st century skills of communication, cooperation, coordination, critical thinking, creativity and collaboration to produce an extended and independent work.

Project overview:

The Project work will be implemented for 20 Marks.

- Out of 20 marks, 10 marks are to be allotted to viva voce and 10 marks for project work.
- For class XI, the evaluation for 20 marks project work should be done by the internal examiner.
- The project has to be done individually. The Project can be made on any of the topics given in the syllabus of a particular class or any contemporary issues.
- The project work can be culminated in the form of films, albums, Presentation, Model, Field Survey, Mock Drills/Mock Event etc.
- Students can use primary sources available in city archives, Primary sources can also include newspaper cuttings, photographs, film footage and recorded written/speeches. Secondary sources may also be used after proper authentication.
- Viva-Voce
- At the end of the stipulated term, each learner will present the research work in the Project File to the examiner.
- The questions should be asked from the Research Work/ Project File of the learner.
- The Examiner should ensure that the study submitted by the learner is his/her original work
- In case of any doubt, authenticity should be checked and verified.

SUGGESTED TOPICS CLASS XI

- 1. Making of the Constitution.
- 2. Elections in India.
- 3. Working of the Indian Judiciary System.
- 4. Social Justice: Are ethics followed in Indian Politics
- 5. Human Rights Act and its gratification in India.
- 6. Political impact on Indian Legislation.

Economics

Project Work

- The students will complete only ONE project.
- Project should be of 3,500-4,000 words (excluding diagrams & graphs), preferably hand-written.
- It will be an independent, self-directed piece of study

The students are required to carry out a survey on any one of the topics mentioned below and will also prepare a questionnaire; the responses will be collected from at least 50 respondents. Thereafter, organization of the data will be done. The data will be then, presented and analyzed to arrive at conclusions.

Mode of presentation/submission of the Project:

At the end of the stipulated term, each student will present the research work in the Project File

to the examiner. The questions should be asked from the Research Work/ Project File of the learner. The project report must consist of the following:

- Introduction of topic/title.
- Identifying the impact, consequences on consumer household during lock down.
- Various stakeholders and effect on each of them.
- Advantages and disadvantages of situations or issues identified.
- Short-term and long-term implications of economic strategies suggested in the course of

Research.

- Validity, reliability, appropriateness and relevance of data used for research work and for presentation in the project file.
- Presentation and writing that is succinct and coherent in project file.
- Citation of the materials referred to, in the file in footnotes, resources section, bibliography etc.

Suggestive list of topics:

*MGNREGA	*Pradhan Mantri Awas Yojana
*Pradhan Mantri Ujjwala Yojana	*Pradhan Mantri Jan Dhan Yojana
*Ayushman Bharat Yojana	*Sukanya Samriddhi Yojana
*Beti Bachao Beti Padhao Yojana	*PM Gati Shakti Yojana
*Bharat Mala Yojana	* National Pension Scheme
*Sarva Siksha Abhiyan	*Mid-Day Meal Yojana
*Pension Beema Yojana	*Golden Quadrilateral Scheme.

Applied Mathematics

Activity 1 To find the number of subsets of a given set and verify that if a set has n number of elements, then the total number of subsets is 2ⁿ.

Activity 2 To verify that for two sets A and B,

 $n(A \times B) = p \ q$ and the total number of relations from A to B is 2^pq , where n(A) = p and n(B) = q.

Activity 3 To represent set theoretic operations using venn diagrams.

Activity 4 To verify distributive law for the three given non-empty sets A, B and C that is $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$.

Activity 5

- (i) Define Common and General Logarithm and draw the graphs of both.
- (ii) Write at least five properties of logarithm.
- (iii) Write the conversion formula from common to general Logarithm/ Relation between common and general Logarithm.

Prepare a project from anyone of the following topics

- i) Fibonacci sequence: Its' history and presence in nature.
- ii) Investigating Graphs of functions for their properties.
- iii) Visit the census site of India

http://www.censusindia.gov.in/Census_Data_2001/Census_Data_Online/Language/State ment3.html Depict the information given there in a pictorial form

- iv) Prepare a questionnaire to collect information about money spent by your friends in a month on activities like travelling, movies, recharging of the mobiles, etc. and draw interesting conclusions
- v) From the newspaper cut out examples of information depicted by graphs. Draw your own conclusions from the graph and compare it with the analysis given in the report.
- vi) Each day newspaper tells us about the maximum temperature, minimum temperature, and humidity. Collect the data for a period of 30 days and represent it graphically. Compare it with the data available for the same time period for the previous year.
- vii) Collect the data on weather, price, inflation, and pollution. Analyse the data and make

meaningful inferences.

viii) Collect data from newspapers on traffic, sports activities and market trends and use excel to study future trends.

Psychology

Objective:

Apply psychological concepts and methods of enquiry to investigate a topic covered in the course.

Project Options:

- 1. Observation Study: Investigate human behavior in a natural setting (e.g., attention in a classroom).
- 2. Survey: Examine attitudes or opinions on a specific topic (e.g., motivation in students).
- 3. Interview: Explore personal experiences or perceptions (e.g., memory strategies).
- 4. Questionnaire: Investigate relationships between variables (e.g., motivation and academic performance).
- 5. Experiment: Design a simple experiment to test a cause-and-effect relationship (e.g., effect of music on concentration).

Topics:

- 1. Human Development (e.g., cognitive development in children)
- 2. Learning (e.g., classical conditioning in everyday life)
- 3. Memory (e.g., strategies for improving memory)
- 4. Motivation (e.g., intrinsic vs. extrinsic motivation)
- 5. Perception (e.g., optical illusions)
- 6. Attention (e.g., focused attention vs. divided attention)
- 7. Thinking (e.g., problem-solving strategies)

Project Requirements:

- 1. Clear research question or hypothesis
- 2. Appropriate methodology (observation, survey, interview, questionnaire, or experiment)
- 3. Data collection and analysis
- 4. Discussion of findings and implications
- 5. Conclusion and recommendations

Submission Guidelines:

- 1. Word limit: 1500-2000 words
- 2. Format: Double-spaced, 12-point font
- 3. Include introduction, methodology, results, discussion, and conclusion

Computer Science

Write following programs in practical file of Computer Science.

Program 1: Calculate Simple Interest

Program 2: Swap Two Variables

Program 3: Convert Celsius to Fahrenheit

Program 4: Calculate Area of Circle

Program 5: Check Even or Odd

Program 6: Calculate Profit or Loss

Program 7: Calculate Total Marks, Percentage and Grade of a student.

Instructions for Practical File Preparation

Materials Needed:

- Interleaf project copy
- Black and blue pens

Formatting Rules:

- Index Page (First Page):
- Title: "Python Programs Class XI" (Center-aligned, underlined).
- Table with columns:
- Program Name (Black pen)
- Page Number (Black pen)
- Date of Completion (Black pen)

For Each Program:

- Start on a fresh page.
- Right Side (Lined):
- Program Name (Top, underlined with black pen).
- Program Code (Written neatly in *blue pen*).
- Left Side (Blank):
- Output (Written in *black pen* with proper spacing).
- Page Number: Top-right corner (e.g., "Pg. 3").

Entrepreneurship

'MAEKET SURVEY'

The students are required to prepare a market survey as per the guidelines issued by CBSE (available on www.cbse.academics.in). Submit a project report having essential features as follows:

- Conduct simple market research with the objectives of estimating demand for the existing product in the market.
- Do research in the form of Questionnaire (No of questions in Questionnaire is 15, with 4 options given in each question.)
- Conduct the survey for the innovative product.
- Selection of product was already discussed in the class 11(Every student has to select different product as topic. It should not be match with other students.
- While selecting the product keep in mind that product will be same in both the project
- Avoid products whose use is banned by the society and government like alcohol, pan masala, tobacco products etc.
- Project should be hand written.
- Project must be presented in A4 size sheets (try to take colored and handmade sheets).
- No cutting and overwriting are allowed. It should be a neat project.
- Project must be creative and attractive.

The project file will be developed in the following sequence-

- Cover page
- Certificate
- Acknowledgement
- Index
- Executive summary / Introduction about product with photo

- Objectives
- General Features of the product
- SWOT Analysis of different competitors (at least take 5 competitors) with photos, logo, tagline, USP and give your suggestions to the company as how they can improve their product
- Respondents List (Questionnaire <u>must be filled by 20 respondents</u>)
- Sample Questionnaire
- Research Methodology
- Analysis Table
- Data analysis and interpretation of each question (with bar or pie diagrams)
- Report Making
- Appendix
 - ✓ Questionnaire filled by 20 respondents
 - ✓ Bibliography

Informatics Practices

- 1.To create a database
- 2.To create student table with the student id, class, section, gender, name, dob, and marks as attributes where the student id is the primary key.
- 3.To insert the details of at least 10 students in the above table.
- 4. To display the entire content of table.
- 5.To display Rno, Name and Marks of those students who are scoring marks more than 50.
- 6.To display Rno, Name, DOB of those students who are born between '2005- 01-01' and '2005-12-31'.

Instructions for Practical File Preparation

Materials Needed:

- Interleaf project copy
- Black and blue pens

Formatting Rules:

- Index Page (First Page):
- Title: "SQL Commands Class XI" (Center-aligned, underlined).
- Table with columns:
- SQL Command (Black pen)
- Page Number (Black pen) Date of Completion (Black pen)
- For Each Program:
- Start on a fresh page.

Right Side (Lined):

• SQL Problem and Query (Top, underlined with black pen).

Left Side (Blank):

• Output (Written in black pencil with proper spacing).

	Page Number: Top-right corner (e.g., "Pg. 3").	
Physical	Practical 1	
Education	Make a project file on sports /game from the list as given running track, cricket,	
	football, hockey grounds, Kho-Kho, Kabaddi, handball, volleyball, basketball,	
	badminton.	
	1 History of the game	
	2 Skills	
	3 Terminology 4 Important Tournaments	
	5. Famous sports personalities	
	6 Injuries and treatment	
	Practical 2	
	Yoga	
	History of yoga	
	Yoga as an Indian heritage	
Commercial Arts	1.Make a composition by arranging 2 or more still objects life flower Vase, Books, Pen	
	stand, Planter, Utensils etc. and colour it.	
	Size of the sheet- A3	
	Medium- Pencil /Pen /Water colours/Oil pastels/Colour Pencils etc.	
	No. of Sheets (compositions) to be submitted- 02 with different mediums	
	2. Write your first name in any suitable font on a textured sheet. Texture should be self-	
	created and do Zentangle art in your Name.	
	Size of the sheet- A4 Medium- Black Pen/marker/Black Paint	
	No. of Sheets to be submitted- 01	
	3. Choose any one folk art and draw and paint it.	
	Folk Arts of India for reference-	
	Warli/ Kalamkari/ Madhubani/ Mandana/ Alpona/ Gond/ Cheriyal/ Pattachitra/ Any	
	other	
	Size of the sheet- A3 Medium-Acrylic / Poster colour	
	No. of Sheets to be submitted- 01	
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