



INDIRAGANDHINATIONALOPENUNIVERSITY

Regional Centre Delhi-3

Format for Assignment Submission

For Term End Exam June/December- JUNE (Year) 2025

(Please read the instructions given below carefully before submitting assignments)



1. Name of the Student : Ashu Chaudhary
2. Enrollment Number : 2501321326
3. Programme Code : MCA_NEW
4. Course Code : MCS-217
(Use this format course-wise separately)
5. Study Centre Code : LSC-38046
6. Name of the Study Centre : RAJDHANI COLLEGE
With complete address : RAJA GARDEN NEW DELHI
7. Mobile Number : 8448713694
8. E-mail ID : Intermezzoballiance@gmail.com
9. Details if this same assignment has been submitted anywhere else also : No
10. Above information is cross checked and it is correct: Yes/No ☒ Yes

Date of Submission: 01-06-25

(Signature of the student)

A. Important Instructions:-

1. Please do not send any assignment at any email of the Regional Centre, it will not be considered.
2. Please avoid duplicacy. Do not re-submit the same assignment anywhere else or by any other means.
3. About the mode of submission of assignments, pl wait for instructions from IGNOU Hqtrs. As soon as we shall come to know, we will share it with all.
4. Please do not use plastic covers. Use plain A4 size pages for assignments for uniformity and better management with this cover page format on each assignment.
5. Please write your name and enrollment no. at the bottom of each page of your assignment.
6. Please retain a photocopy set of assignment submitted with you for record (may be asked to submit at later stage) and also keep the assignment submission receipt in safe custody.
7. If assignment awards are not updated in your Grade Card within next 09 months, please write to us at rcdelhi3@ignou.ac.in giving your complete details and attaching the proof of assignment submission.
8. Assignment Question Paper can be downloaded from: <https://webservices.ignou.ac.in/assignments/>

B. Compulsory sequence of the Assignment Set:

1. Duly Filled in Assignment Submission Cover Page (This Format Page).
2. Copy of IGNOU Identity Card.
3. Print out of valid/applicable assignment question paper.
4. Handwritten Assignment, written on both the sides of page (preferably plain A4 size).



इंदिरा गांधी राष्ट्रीय मुक्त विश्वविद्यालय
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Indira Gandhi National Open University
Maidan Garhi, New Delhi - 110068



IGNOU - Student Identity Card

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RC Code : 38: DELHI 3 Naraina

Name of the Programme : MCA_NEW : Master of Computer Applications

Name : ASHU CHAURASIYA

Father's Name : VIJAY

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Instructions :

1. This card should be produced on demand at the Study Center, Examination Center or any other Establishment of IGNOU to use its facilities.
2. The facilities would be available only relating to the Programme/course for which the student is registered.
3. This ID Card is generated online. Students are advised to take a color print of this ID Card and get it laminated.
4. The student details can be cross checked with the QR Code at www.ignou.ac.in



Ashu

Register

Registrar
Student Registration Division

Course Code	:	MCSL-217
Course Title	:	Software Engineering Lab
Assignment Number	:	MCA_NEW(I)/217/Assign/2025
Maximum Marks	:	100
Weightage	:	40%
Last Dates for Submission	:	30th April 2025 (for January session)
		31st October 2025 (for July session)

This assignment has one question for 40 marks. Answer this question. Your Lab Records will carry 40 Marks. Rest 20 marks are for viva voce. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the programme guide for the format of presentation.

Note: You must execute the program and submit the program logic, sample input and output along with the necessary documentation. Assumptions can be made wherever necessary.

Q1:

ABC is a network of Hospitals. Its having Hospitals across the World. Its possible to take appointment for any Doctor for an available slot on an available date through its website. Its having a Chatbot also. There are many specialities in each of its Hosptitals. However, not all specialities are available across all its Hospitals. Doctors may provide consultancy services in more than one hospital of its network. Its possible to make payment of consultation fee online while taking appointment or directly at hospital prior to consultation. Make assumptions, wherever necessary. Also, list them very clearly.

Now, with reference to the above, answer the following:

- | | |
|---|------------|
| (1) List the Entities | (10 Marks) |
| (2) For each Entity, list Attributes | (10 Marks) |
| (3) Define relationships between the Entities | (10 Marks) |
| (4) Finally, draw the Entity Relationship Diagram | (10 Marks) |

Question no. (1) List the Entities

Answer:

Hospital

Doctor

Patient

Speciality

Appointment

Payment

Availability

Question no. (2) For each Entity, list Attributes

Answer:

Hospital: Hospital ID (PK), Name, Address, Contact Number, Email, City, Country

Doctor: Doctor ID (PK), First Name, Last Name, Contact Number, Email, License Number, Consultation Fee

Patient: Patient ID (PK), First Name, Last Name, Date of Birth, Gender, Contact Number, Email, Address

Speciality: Speciality ID (PK), Name, Description

Appointment: Appointment ID (PK), Appointment Date, Appointment Time, Status, Booking Date/Time, Payment Status, Patient ID (FK), Doctor ID (FK), Hospital ID (FK), Availability ID (FK)

Payment: Payment ID (PK), Appointment ID (FK), Amount, Payment Date/Time, Payment Method, Transaction ID, Status

Availability: Availability ID (PK), Doctor ID (FK), Hospital ID (FK),

Date, Start Time, End Time, Is Booked

Question no. (3) Define relationships between the Entities

Answer:

Hospital and Speciality: Many-to-Many (A Hospital offers many Specialities; a Speciality is offered by many Hospitals).

Doctor and Speciality: Many-to-Many (A Doctor has many Specialities; a Speciality has many Doctors).

Doctor and Hospital: Many-to-Many (A Doctor works at many Hospitals; a Hospital has many Doctors).

Doctor and Availability: One-to-Many (A Doctor has many Availability slots; an Availability slot belongs to one Doctor).

Availability and Appointment: One-to-One (An Availability slot is booked by one Appointment; an Appointment books one Availability slot).

Patient and Appointment: One-to-Many (A Patient makes many Appointments; an Appointment is made by one Patient).

Doctor and Appointment: One-to-Many (A Doctor has many Appointments; an Appointment is for one Doctor).

Hospital and Appointment: One-to-Many (A Hospital hosts many Appointments; an Appointment takes place at one Hospital).

Appointment and Payment: One-to-One (An Appointment has one Payment; a Payment is for one Appointment).

Question no. (4) Finally, draw the Entity Relationship Diagram

Answer: The Entity Relationship Diagram (ERD) would visually represent the following:

Relationships (with Cardinality):

Hospital (1) --offers-- (M) Hospital_Speciality (M) --is offered by-- (1)

Speciality

Doctor (1) --has-- (M) Doctor_Speciality (M) --is had by-- (1) Speciality

Doctor (1) --works at-- (M) Doctor_Hospital (M) --has doctors-- (1)

Hospital

Doctor (1) --has-- (M) Availability

Availability (1) --is booked by-- (1) Appointment

Patient (1) --makes-- (M) Appointment

Doctor (1) --has-- (M) Appointment

Hospital (1) --hosts-- (M) Appointment

Appointment (1) --has-- (1) Payment