ACADEMIC YEAR : 2019-20

PROJECT REPORT ON :

GUESS A NUMBER GAME

NAME: SHAILY TIWARI

CLASS: 12th

SUBJECT: COMPUTER SCIENCE

PROJECT GUIDE: *MRS.EKTA CHODHARY*

PGT(CS)

CERTIFICATE

This is to certify that SHAILY TIWARI of class 12th

Has successfully completed the project Work

Entitled GUESS A NUMBER GAME in the subject Computer Science

laid down in the regulations of CBSE Practical Examination.

Teacher's Signature:

ACKNOWLEDGEMENT

I would like to express my gratitude towards my teacher *MRS. EKTA CHODHARY* for their valuable time ,support and supervision all through this project and also I would like to thank her for helping me in completing this project with the given time of frame.

PROJECT ON GUESS A NUMBER GAME

INTRODUCTION

In this game the computer chooses a random number between 1and 100, and the player tries to guess the number in as few attempts as possible. Each time the player enters a guess, the computer tells him whether the guess is too high, too low, or right. Once the player guesses the number, the game is over.

OBJECTIVES OF THE PROJECT

The objective of this project is to let the students apply the programming knowledge into a real world situation/problem and exposed the students how programming skills helps in developing a good software.

1. Write programs utilizing modern software tools.

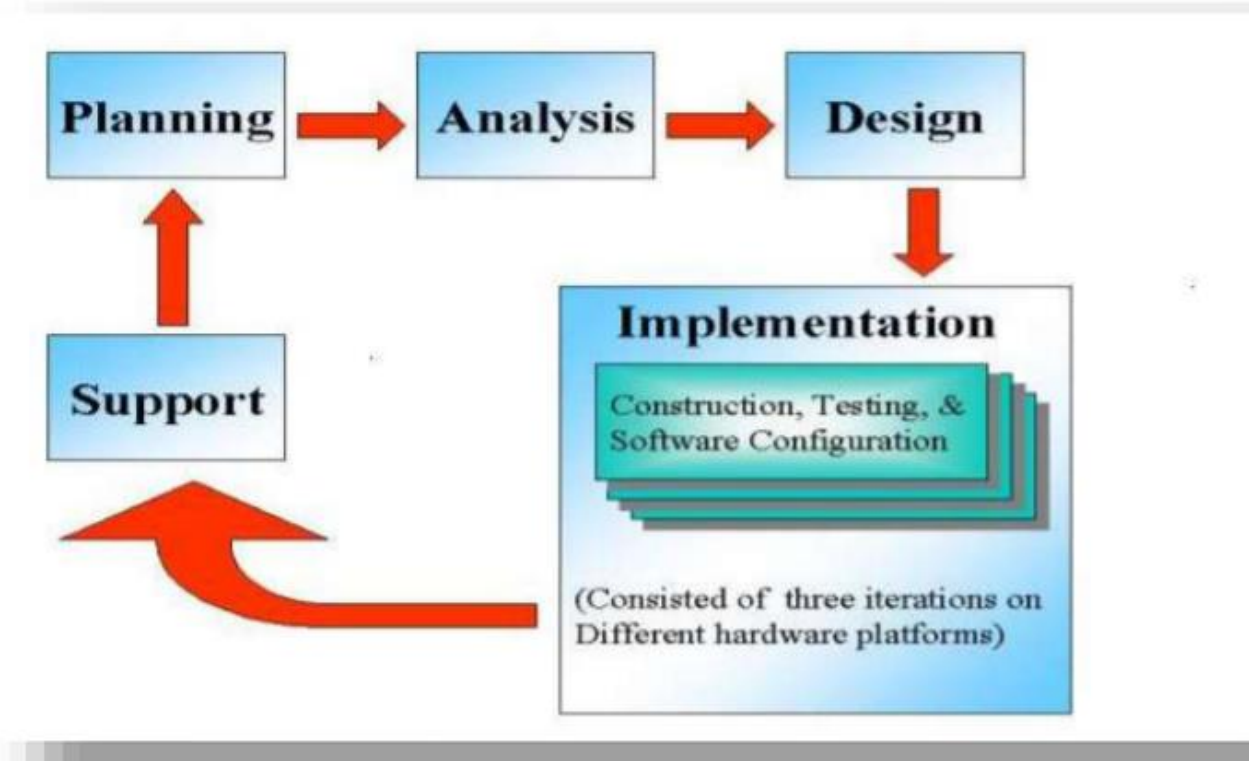
2. Apply object oriented programming principles effectively when developing small to medium sized projects.

3. Write effective procedural code to solve small to medium sized problems.

4. Students will demonstrate a breadth of knowledge in computer science, as exemplified in the areas of systems, theory and software development.

5. Students will demonstrate ability to conduct a research or applied Computer Science project, requiring writing and presentation skills which exemplity scholarly style in computer science.

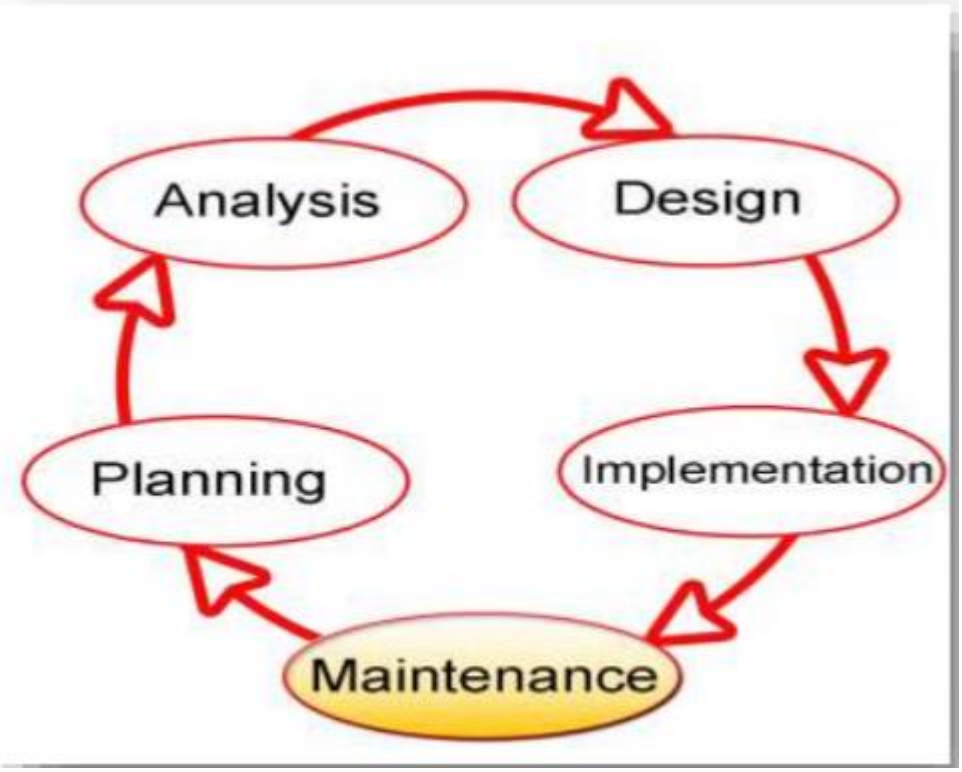
SYSTEM DEVELOPMENT LIFE CYCLE (SDLC)



The systems development life cycle is a project management technique that divides complex projects into smaller, more easily managed segments or phases.

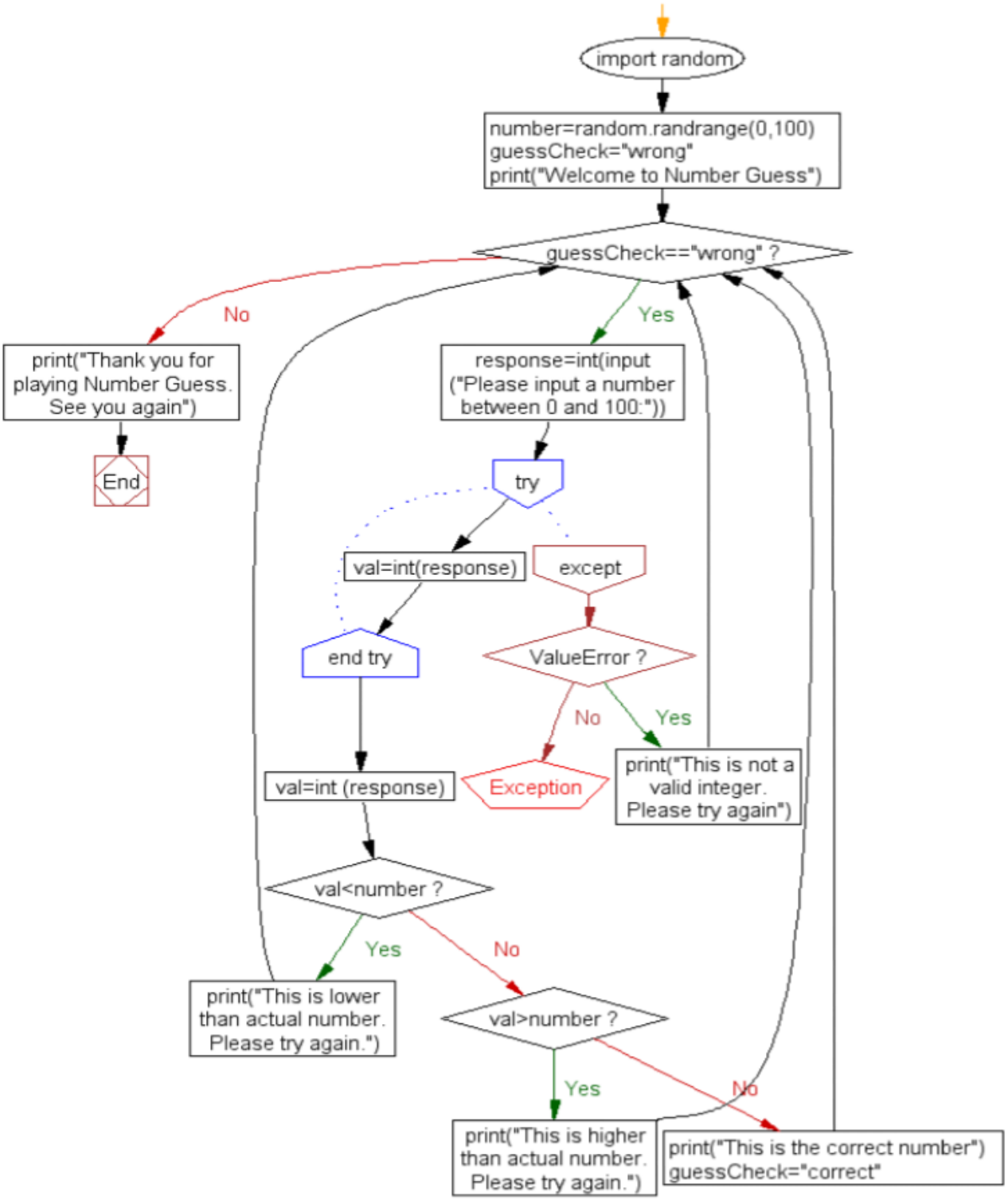
Software development projects typically include initiation, planning, design,development, testing, implementation, and maintenance phase.

PICTORIAL REPRESENTATION OF SDLC:



1) The planning phase is the most critical step in completing development, acquisition, and maintenance projects.
2) Analysis phase formally defines the detailed functional user requirements using high-level requirements identified in the Initiation, System Concept, and Planning phases.
3) The design phase involves converting the informational, functional, and network requirements identified during the initiation and planning phases into unified design specifications that developers use to script programs during the development phase.
4) Implementation phase is initiated after the system has been tested and accepted by the user. In this phase, the system is installed to support the intended business functions.
5) Maintenance phase is monitored for continued performance in accordance with user requirements and needed system modifications are incorporated.

FLOW CHART:


import random
number=random.randrange(0,100)
guessCheck="wrong"
print("Welcome to Number Guess")
guessCheck=="wrong" ?
No
Yes
print("Thank you for playing Number Guess. See you again")
End
response=int(input ("Please input a number between 0 and 100:"))
try
val=int(response)
except
end try
ValueError ?
No
Yes
Exception
print("This is not a valid integer. Please try again")
val=int (response)
val<number ?
Yes
No
print("This is lower than actual number. Please try again.")
val>number ?
Yes
No
print("This is higher than actual number. Please try again.")
print("This is the correct number")
guessCheck="correct"

SOURCE CODE:

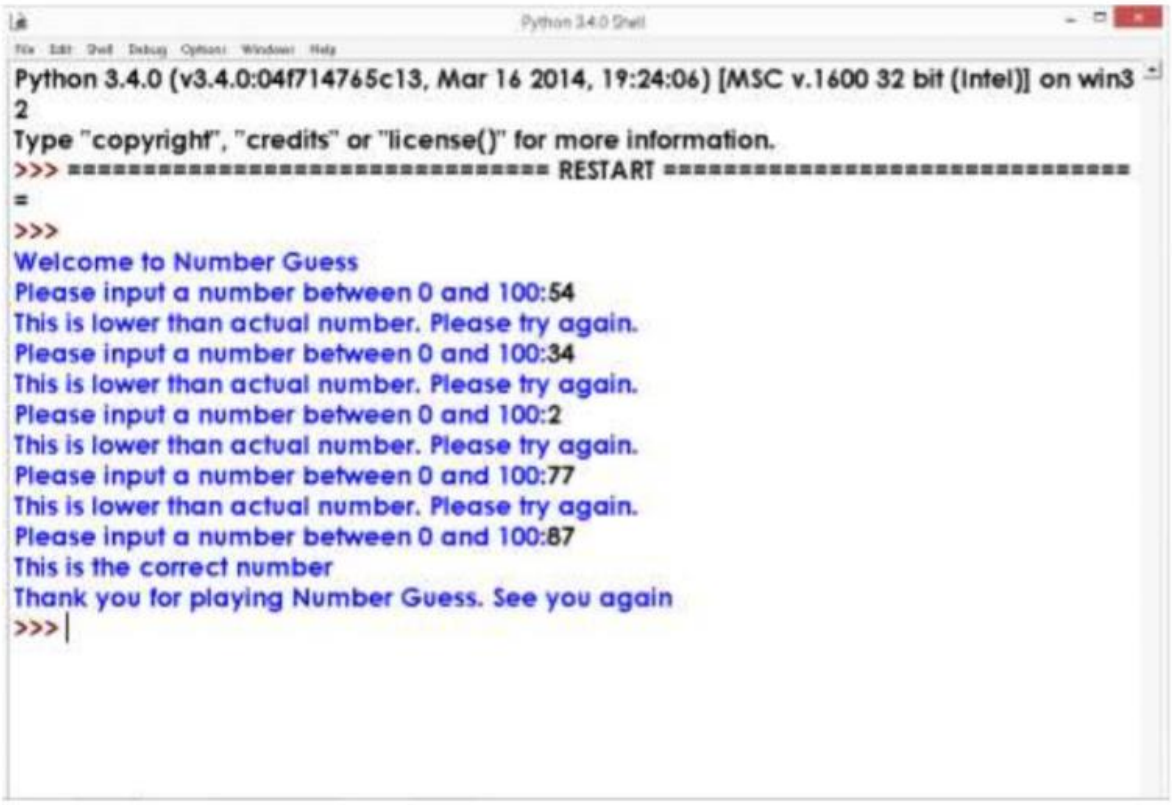
```
import random
number=random.randrange(0,100)
guessCheck="wrong"
print("Welcome to Number Guess")
while guessCheck=="wrong":
response=int(input("Please input a number between 0 and
100:"))
try:
val=int(response)
except ValueError:
print("This is not a valid integer. Please try
again")
continue
val=int (response)
if val<number:
print("This is lower than actual number. Please try
again.")
elif val>number:
print("This is higher than actual number. Please try
```

```
again.")
else:
print("This is the correct number")
guessCheck="correct"
print("Thank you for playing Number Guess. See you
again")
SOLUTION II
from random import randint #To generate a random number
name = input("Please Enter your name: ")
print("Welcome to my Number game, " + name)
def game():
 rand_number = randint(0,100) #Generates a random
number
 print("\nI have selected a number between 1 to 100...")
 print("You have 6 chances to guess that number...")
 i = 1
 r = 1
 while i<7: #6 Chances to the user
 user_number = int(input('Enter your number: '))
 if user_number < rand_number:
 print("\n" + name + ", My number is greater than
your guessed number")
```

```
 print("you now have " + str(6-i)+ " chances left"
)
 i = i+1
 elif user_number > rand_number:
 print("\n" + name + ", My number is less than your
guessed number")
print("you now have " + str(6-i)+ " chances left"
)
 i = i+1
 elif user_number == rand_number:
 print("\nCongratulations "+name+"!! You have
guessed the correct number!")
 r = 0;
 break
 else:
 print("This is an invalid number. Please try
again")
 print("you now have " + str(6-i)+ " chances left"
)
 continue
 if r==1:
 print("Sorry you lost the game!!")
```

```
 print("My number was = " + str(rand_number))
def main():
 game()
 while True:
 another_game = input("Do you wish to play again?(y/n):
")
 if another_game == "y":
 game()
 else:
 break
main()
print("\nEnd of the Game! Thank you for playing!")
```

OUTPUT


Python 3.4.0 Shell
File Edit Shell Debug Options Windows Help
Python 3.4.0 (v3.4.0:04f714765c13, Mar 16 2014, 19:24:06) [MSC v.1600 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> ========== RESTART ==========
>>>
Welcome to Number Guess
Please input a number between 0 and 100:54
This is lower than actual number. Please try again.
Please input a number between 0 and 100:34
This is lower than actual number. Please try again.
Please input a number between 0 and 100:2
This is lower than actual number. Please try again.
Please input a number between 0 and 100:77
This is lower than actual number. Please try again.
Please input a number between 0 and 100:87
This is the correct number
Thank you for playing Number Guess. See you again
>>>

HARDWARE AND SOFTWARE REQUIREMENTS

I.OPERATING SYSTEM : WINDOWS 7 AND ABOVE

II. PROCESSOR : PENTIUM(ANY) OR AMD

ATHALON(3800+- 4200+ DUAL CORE)

III. MOTHERBOARD : 1.845 OR 915,995 FOR PENTIUM 0R MSI

K9MM-V VIA K8M800+8237R PLUS

CHIPSET FOR AMD ATHALON

IV. RAM : 512MB+

V. Hard disk : SATA 40 GB OR ABOVE

VI. CD/DVD r/w multi drive combo: (If back up required)

VII. FLOPPY DRIVE 1.44 MB : (If Backup required)

VIII. MONITOR 14.1 or 15 -17 inch

IX. Key board and mouse

X. Printer : (if print is required – [Hard copy])

SOFTWARE REQUIREMENTS:

I. Windows OS
II. Python

BIBLIOGRAPHY

1. Computer science With Python - Class XII By : Sumita Arora

2. A Project Report On GUESS a Number game

By : SHAILY TIWARI

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