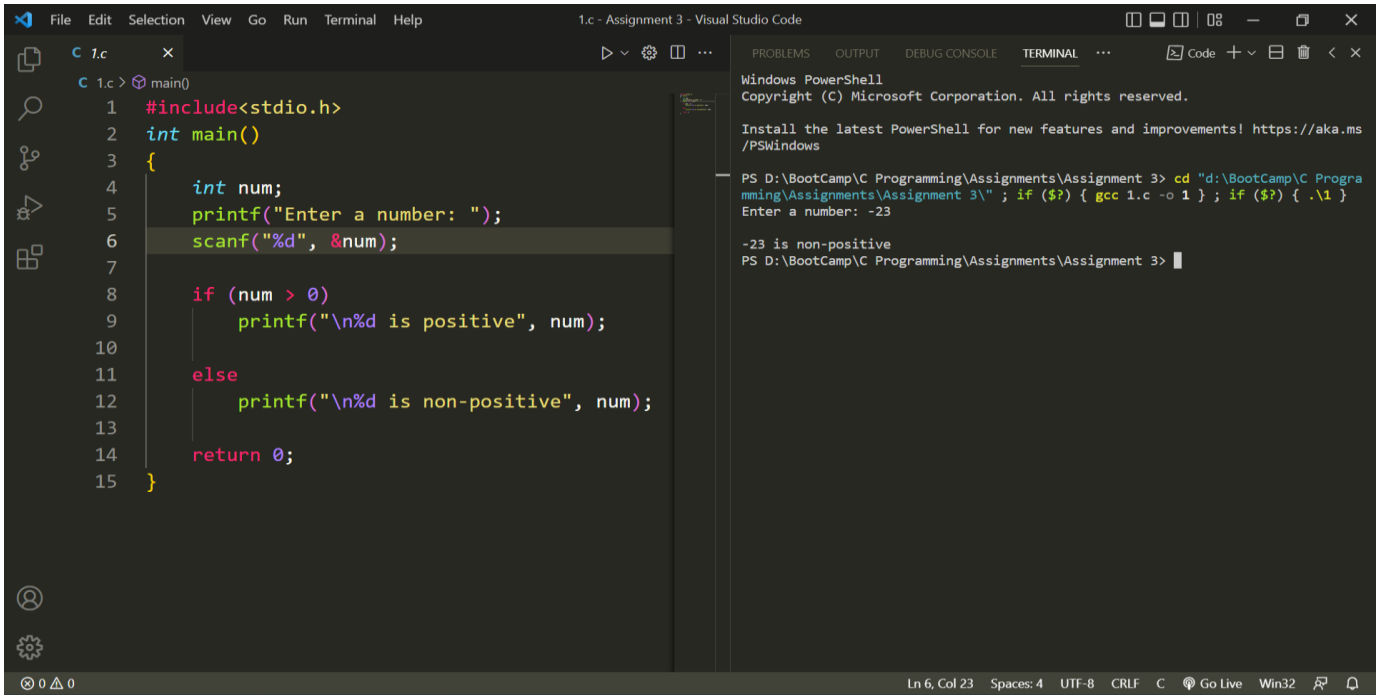
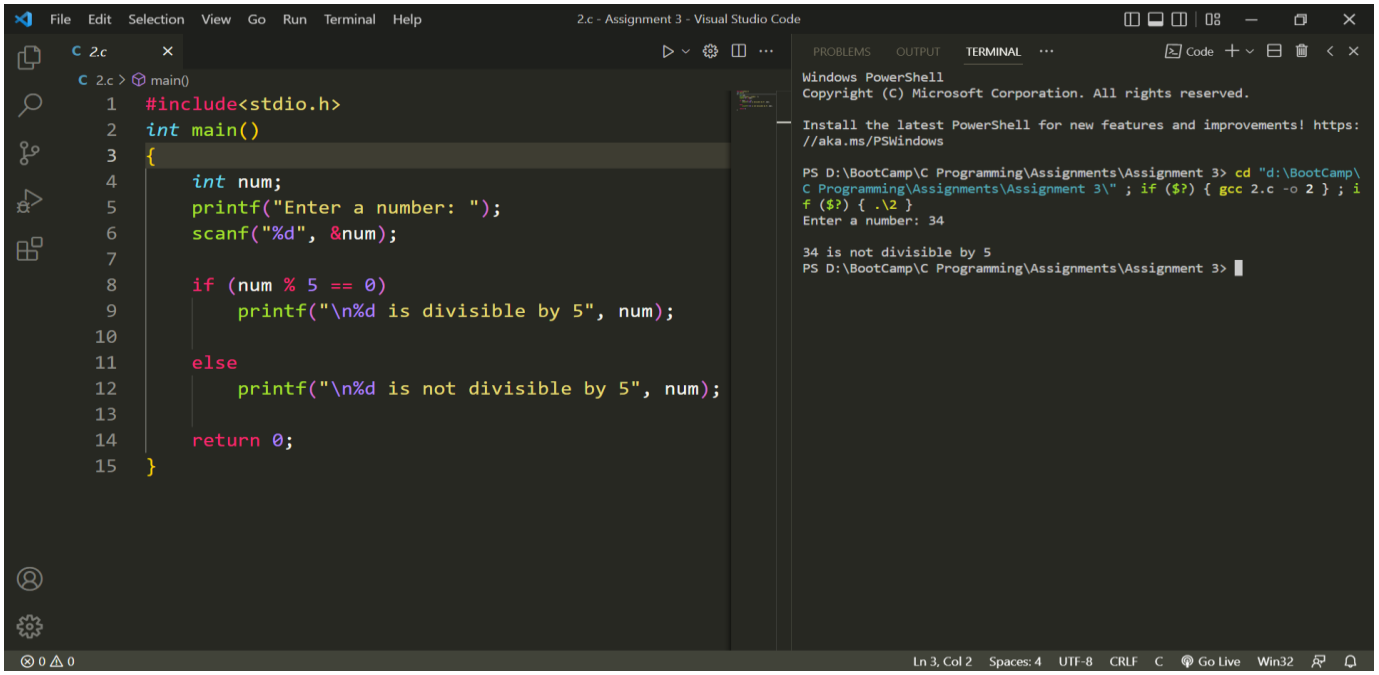
ASSIGNMENT – 03

(Decision Control Statements)

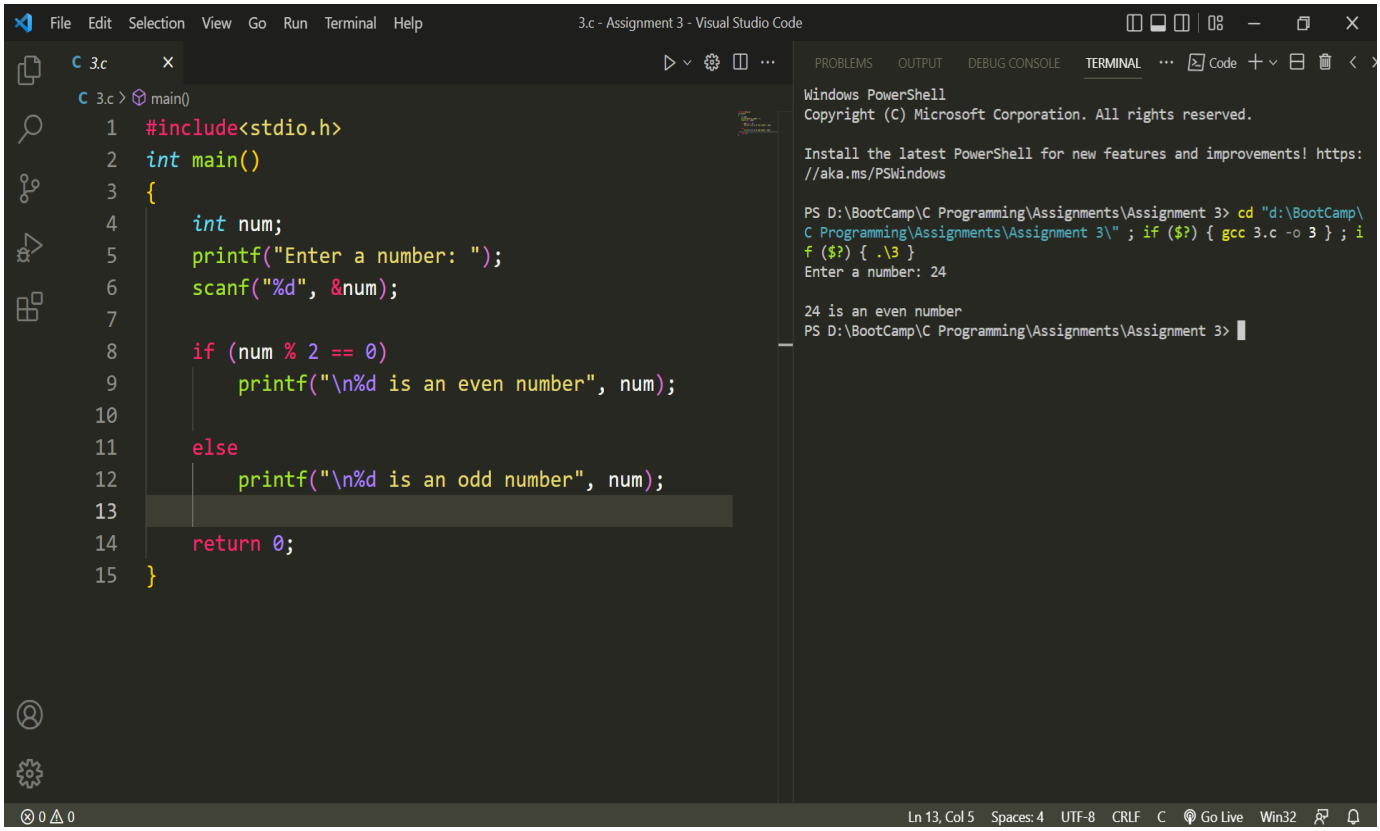
Q1.



Q2.



Q3.


File Edit Selection View Go Run Terminal Help
3.c - Assignment 3 - Visual Studio Code
3.c
3.c > main()
#include<stdio.h>
int main()
{
int num;
printf("Enter a number: ");
scanf("%d", &num);
if (num % 2 == 0)
printf("\n%d is an even number", num);
else
printf("\n%d is an odd number", num);
return 0;
}
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
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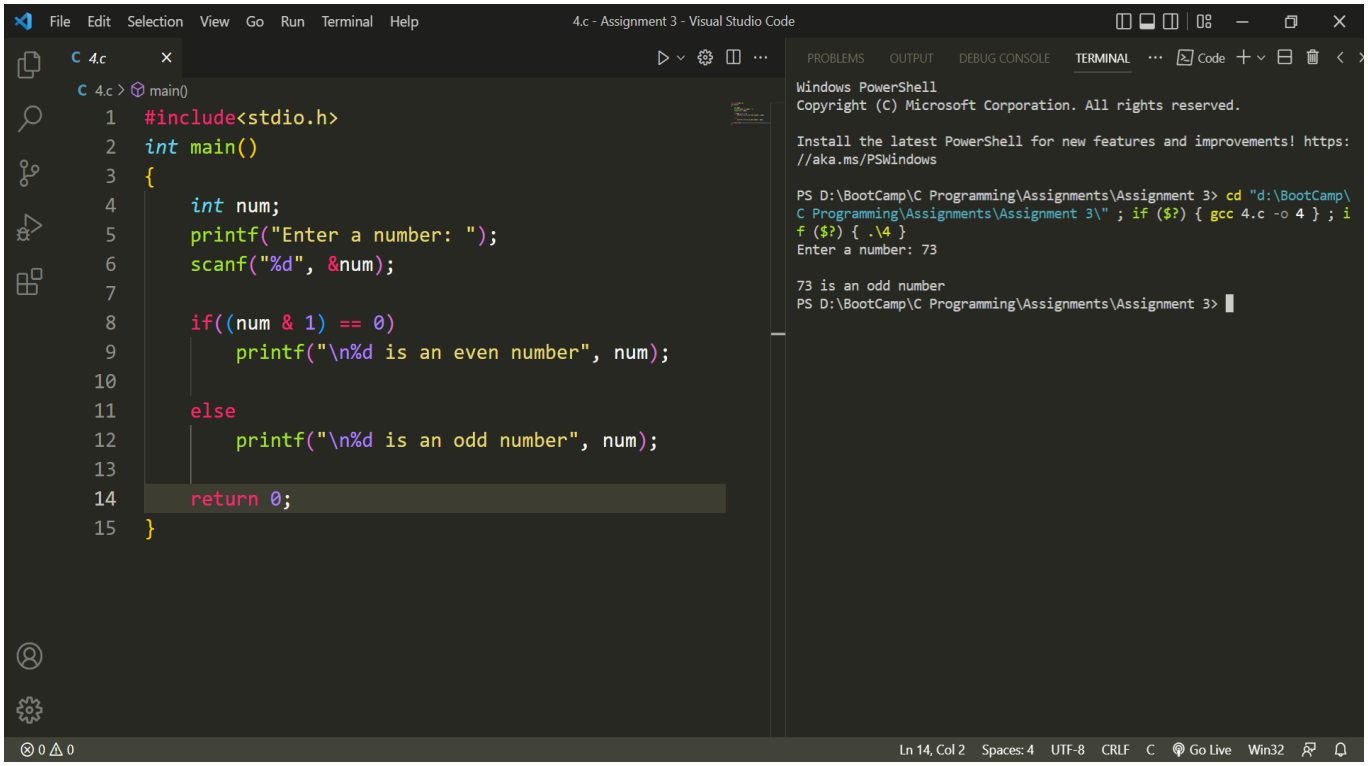
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCamp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 3.c -o 3 } ; if ($?) { .\3 }
Enter a number: 24
24 is an even number
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
Ln 13, Col 5 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q4.


File Edit Selection View Go Run Terminal Help
4.c - Assignment 3 - Visual Studio Code
4.c
4.c > main()
#include<stdio.h>
int main()
{
int num;
printf("Enter a number: ");
scanf("%d", &num);
if((num & 1) == 0)
printf("\n%d is an even number", num);
else
printf("\n%d is an odd number", num);
return 0;
}
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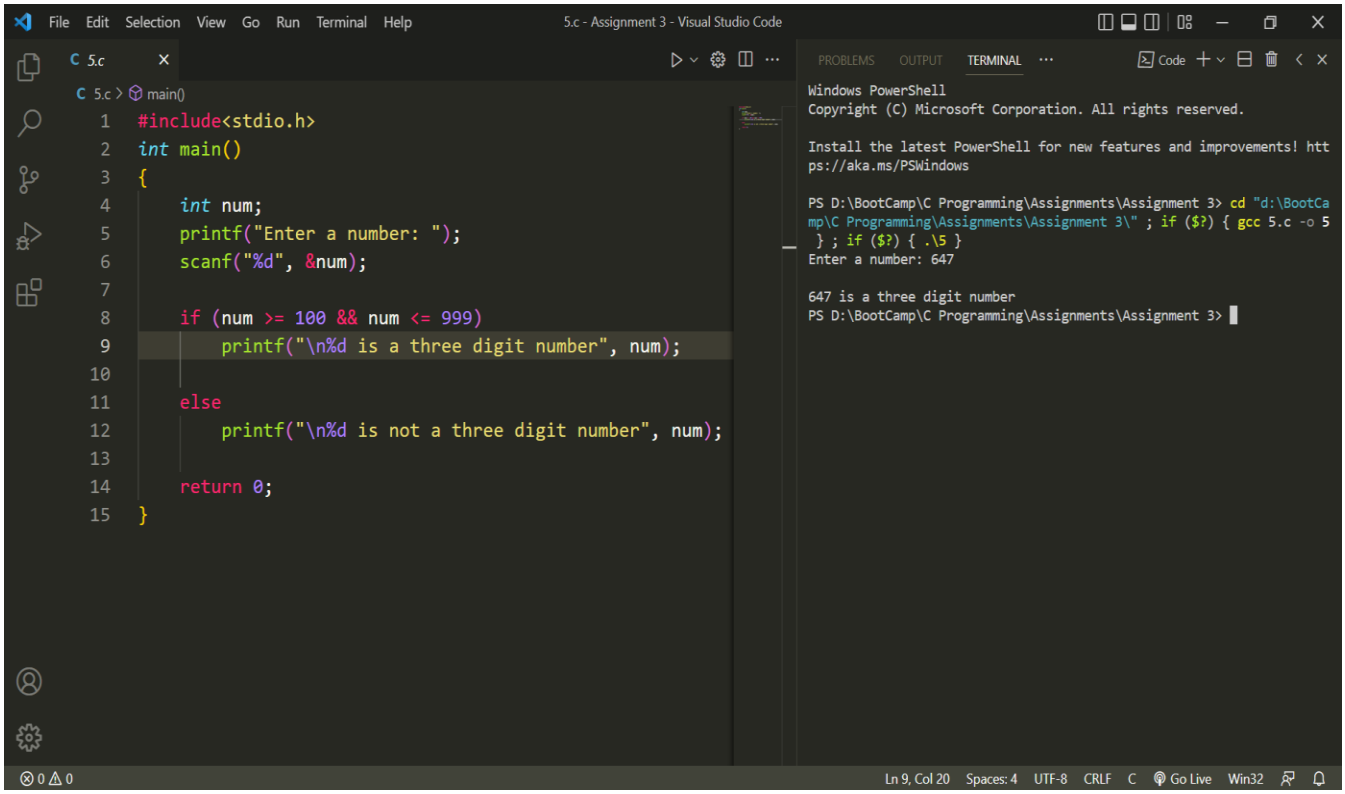
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCamp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 4.c -o 4 } ; if ($?) { .\4 }
Enter a number: 73
73 is an odd number
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
Ln 14, Col 2 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q5.


File Edit Selection View Go Run Terminal Help
5.c - Assignment 3 - Visual Studio Code
5.c
5.c > main()
#include<stdio.h>
int main()
{
int num;
printf("Enter a number: ");
scanf("%d", &num);
if (num >= 100 && num <= 999)
printf("\n%d is a three digit number", num);
else
printf("\n%d is not a three digit number", num);
return 0;
}
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Code
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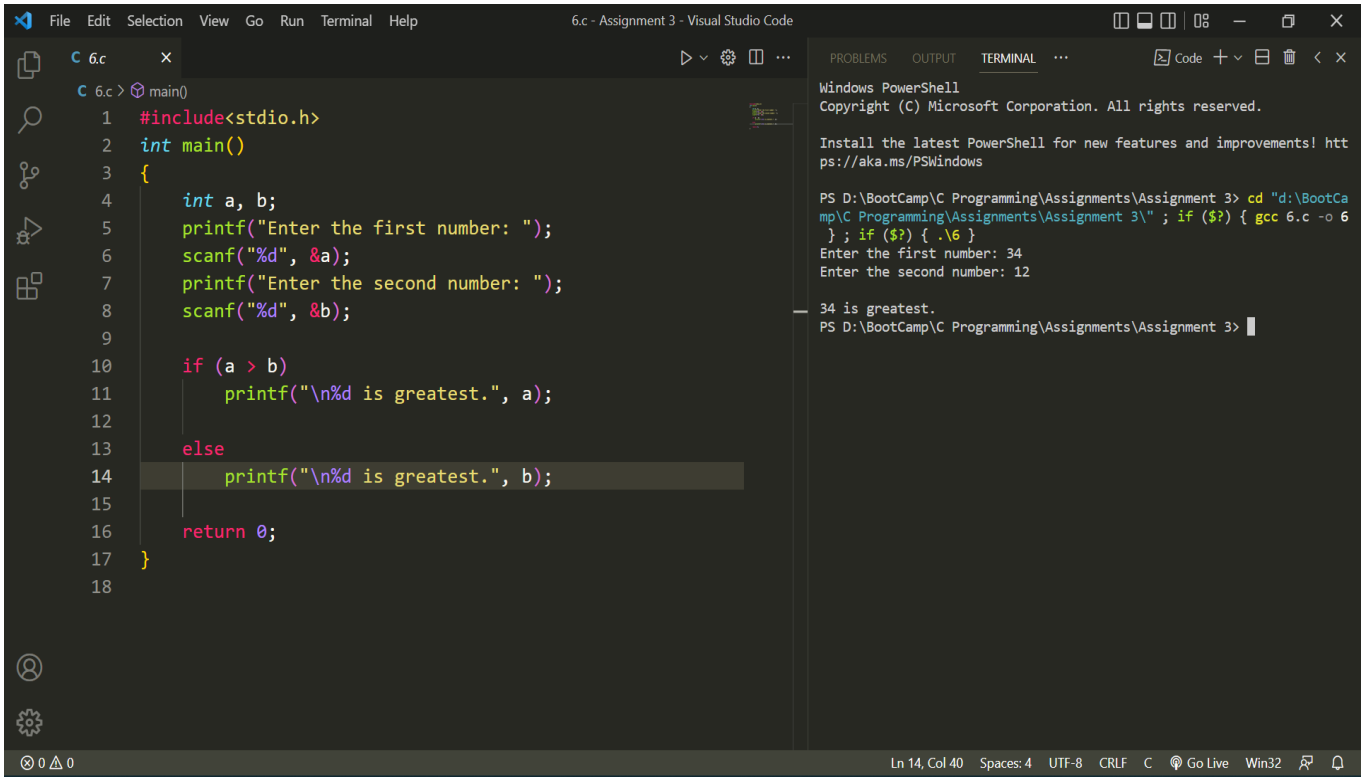
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCa
mp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 5.c -o 5
} ; if ($?) { .\5 }
Enter a number: 647
647 is a three digit number
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
Ln 9, Col 20 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q6.


File Edit Selection View Go Run Terminal Help
6.c - Assignment 3 - Visual Studio Code
6.c
6.c > main()
#include<stdio.h>
int main()
{
int a, b;
printf("Enter the first number: ");
scanf("%d", &a);
printf("Enter the second number: ");
scanf("%d", &b);
if (a > b)
printf("\n%d is greatest.", a);
else
printf("\n%d is greatest.", b);
return 0;
}
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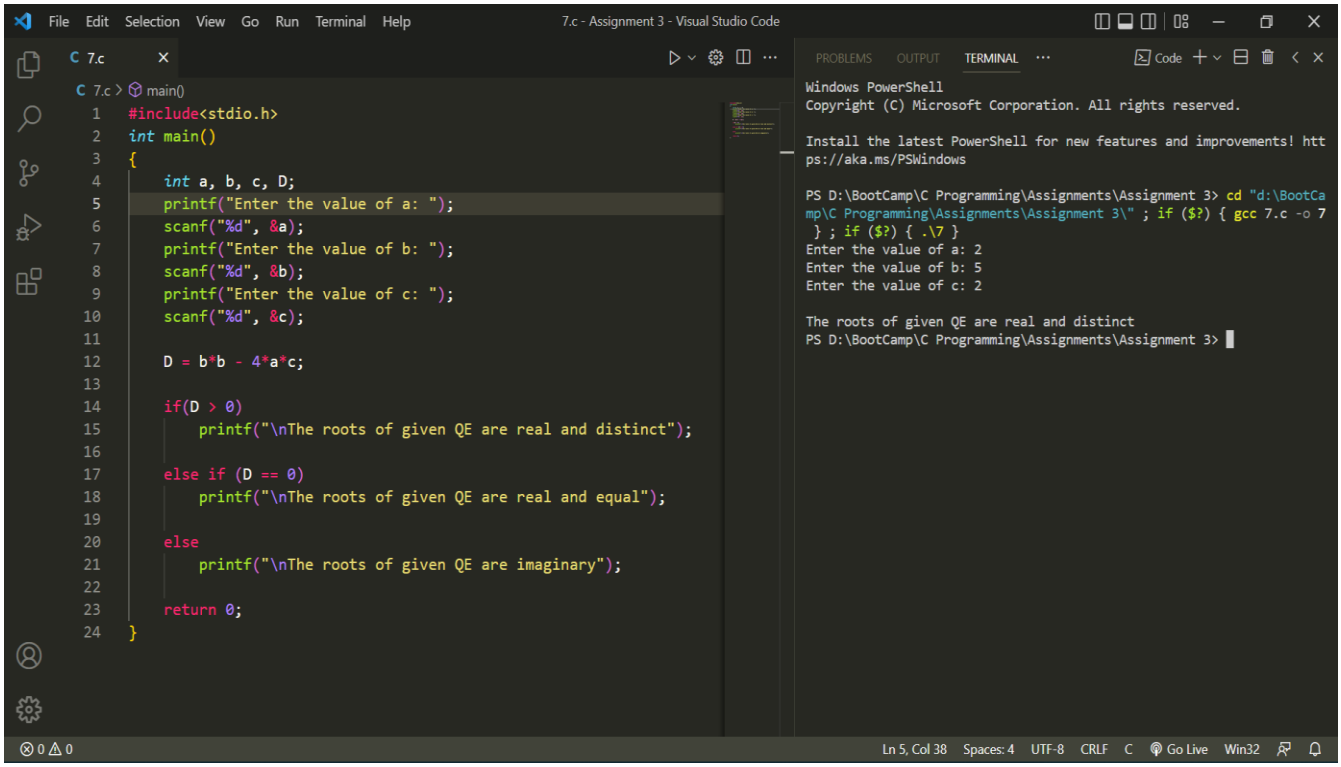
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCa
mp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 6.c -o 6
} ; if ($?) { .\6 }
Enter the first number: 34
Enter the second number: 12
34 is greatest.
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
Ln 14, Col 40 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q7.


File Edit Selection View Go Run Terminal Help
7.c - Assignment 3 - Visual Studio Code
7.c
7.c > main()
#include<stdio.h>
int main()
{
int a, b, c, D;
printf("Enter the value of a: ");
scanf("%d", &a);
printf("Enter the value of b: ");
scanf("%d", &b);
printf("Enter the value of c: ");
scanf("%d", &c);
D = b*b - 4*a*c;
if(D > 0)
printf("\nThe roots of given QE are real and distinct");
else if (D == 0)
printf("\nThe roots of given QE are real and equal");
else
printf("\nThe roots of given QE are imaginary");
return 0;
}
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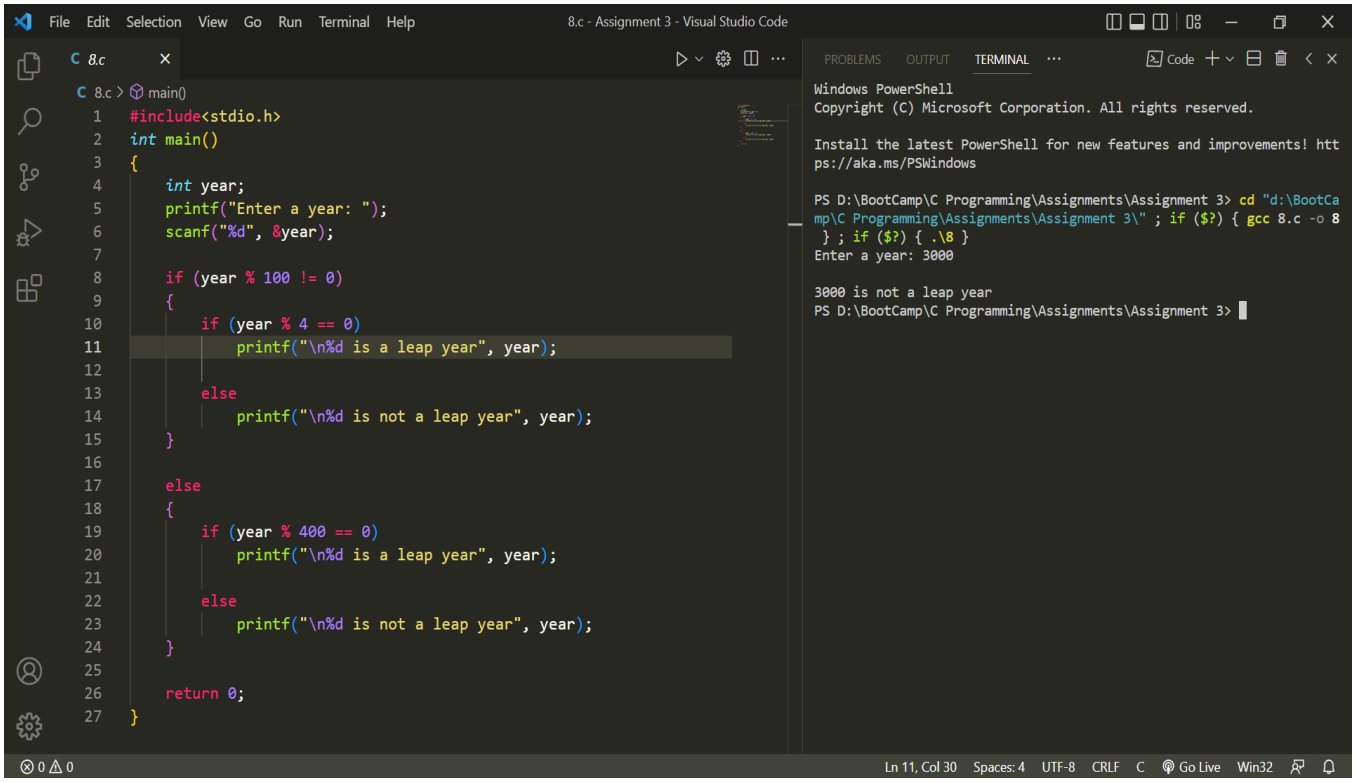
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCa
mp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 7.c -o 7
} ; if ($?) { .\7 }
Enter the value of a: 2
Enter the value of b: 5
Enter the value of c: 2
The roots of given QE are real and distinct
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
Ln 5, Col 38 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q8.


File Edit Selection View Go Run Terminal Help
8.c - Assignment 3 - Visual Studio Code
8.c
8.c > main()
#include<stdio.h>
int main()
{
int year;
printf("Enter a year: ");
scanf("%d", &year);
if (year % 100 != 0)
{
if (year % 4 == 0)
printf("\n%d is a leap year", year);
else
printf("\n%d is not a leap year", year);
}
else
{
if (year % 400 == 0)
printf("\n%d is a leap year", year);
else
printf("\n%d is not a leap year", year);
}
return 0;
}
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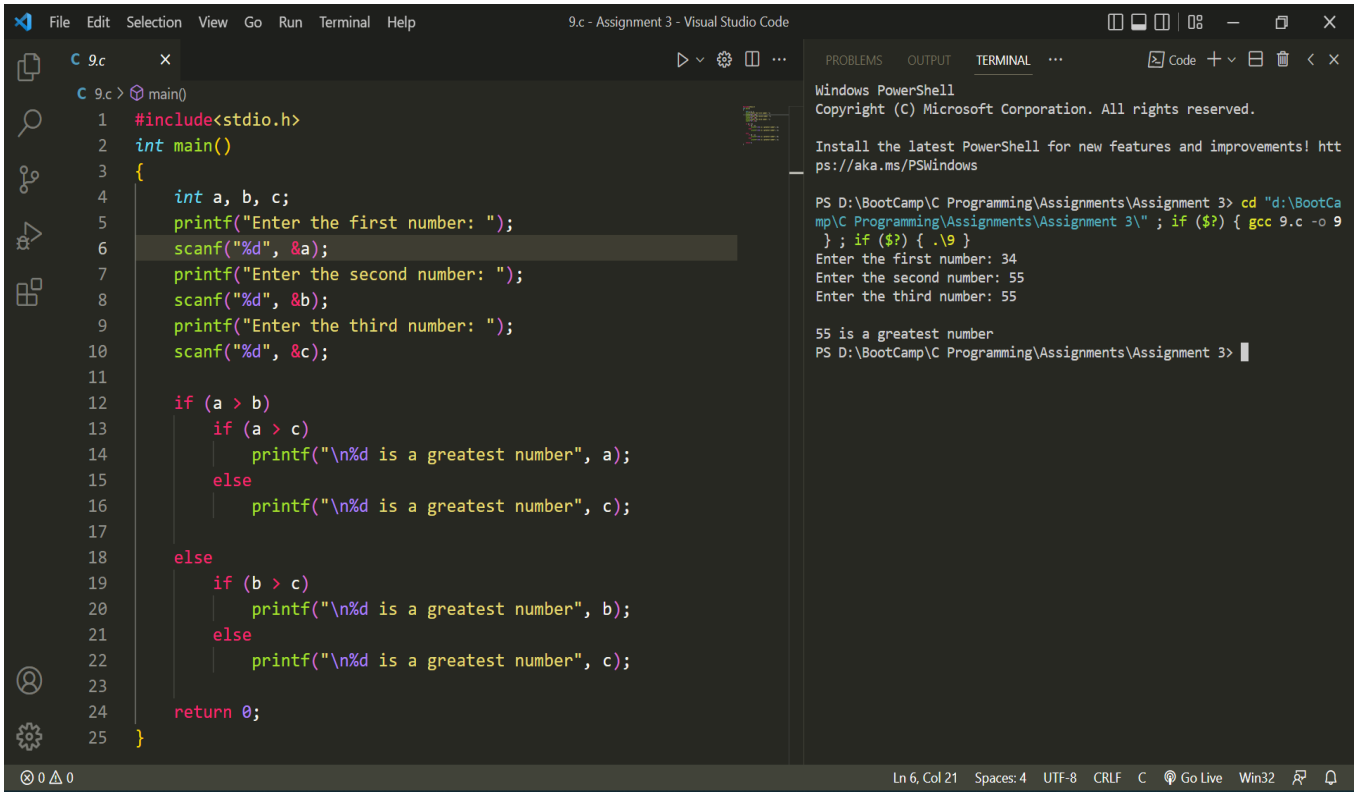
ps://aka.ms/PSWindows
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCa
mp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 8.c -o 8
} ; if ($?) { .\8 }
Enter a year: 3000
3000 is not a leap year
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
Ln 11, Col 30 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q9.


File Edit Selection View Go Run Terminal Help
9.c - Assignment 3 - Visual Studio Code
9.c
9.c > main()
#include<stdio.h>
int main()
{
int a, b, c;
printf("Enter the first number: ");
scanf("%d", &a);
printf("Enter the second number: ");
scanf("%d", &b);
printf("Enter the third number: ");
scanf("%d", &c);
if (a > b)
if (a > c)
printf("\n%d is a greatest number", a);
else
printf("\n%d is a greatest number", c);
else
if (b > c)
printf("\n%d is a greatest number", b);
else
printf("\n%d is a greatest number", c);
return 0;
}
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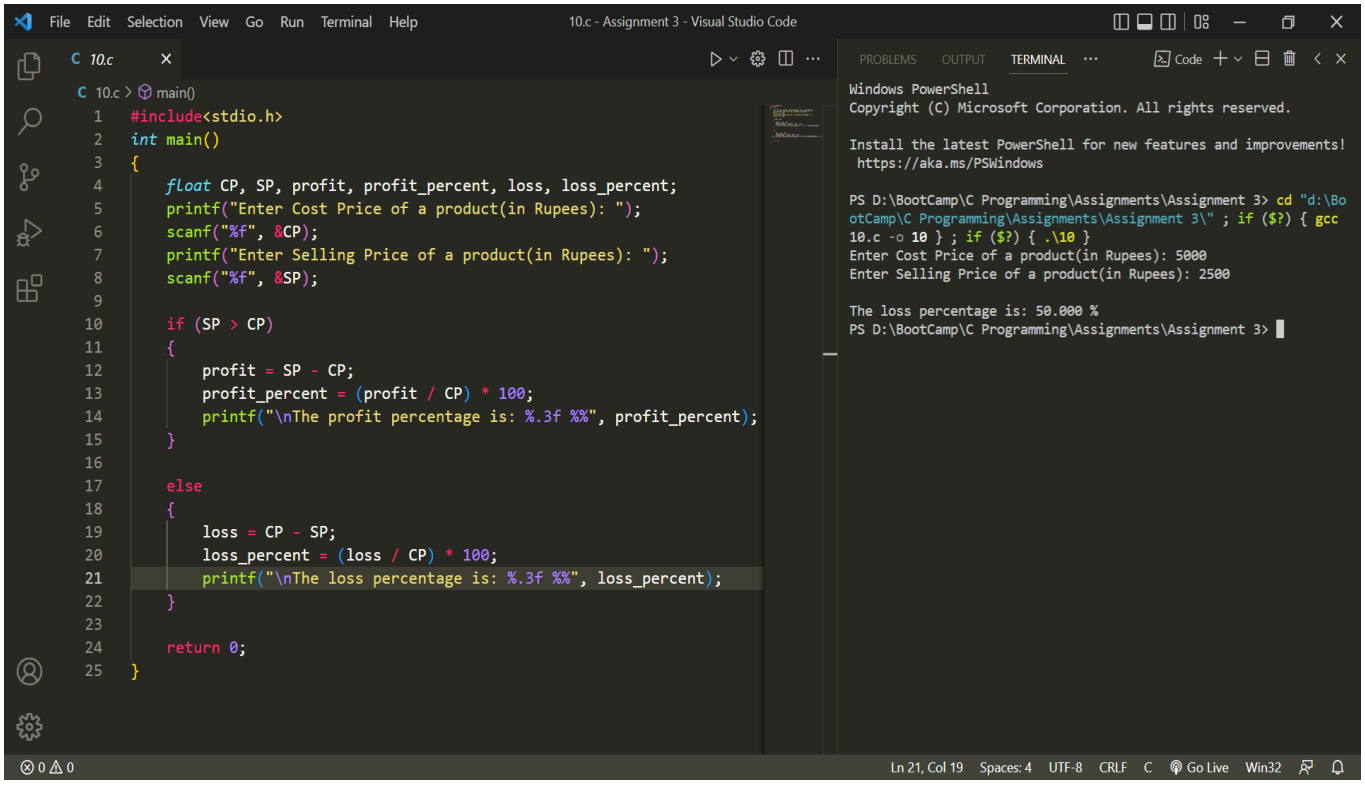
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCamp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 9.c -o 9 } ; if ($?) { .\9 }
Enter the first number: 34
Enter the second number: 55
Enter the third number: 55
55 is a greatest number
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
Ln 6, Col 21 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q10.


File Edit Selection View Go Run Terminal Help
10.c - Assignment 3 - Visual Studio Code
10.c
10.c > main()
#include<stdio.h>
int main()
{
float CP, SP, profit, profit_percent, loss, loss_percent;
printf("Enter Cost Price of a product(in Rupees): ");
scanf("%f", &CP);
printf("Enter Selling Price of a product(in Rupees): ");
scanf("%f", &SP);
if (SP > CP)
{
profit = SP - CP;
profit_percent = (profit / CP) * 100;
printf("\nThe profit percentage is: %.3f %%", profit_percent);
}
else
{
loss = CP - SP;
loss_percent = (loss / CP) * 100;
printf("\nThe loss percentage is: %.3f %%", loss_percent);
}
return 0;
}
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Code
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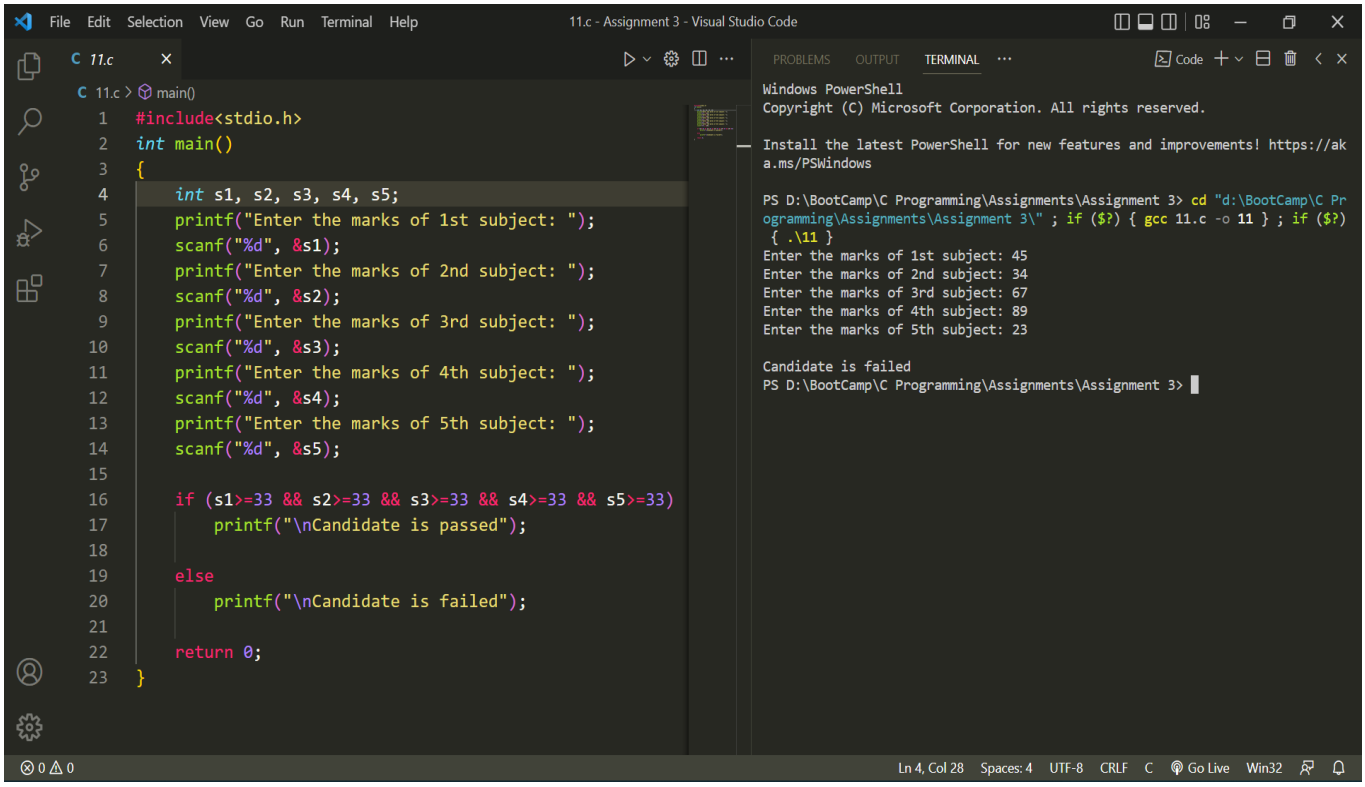
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCamp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 10.c -o 10 } ; if ($?) { .\10 }
Enter Cost Price of a product(in Rupees): 5000
Enter Selling Price of a product(in Rupees): 2500
The loss percentage is: 50.000 %
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
Ln 21, Col 19 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q11.


File Edit Selection View Go Run Terminal Help
11.c - Assignment 3 - Visual Studio Code
11.c
11.c > main()
#include<stdio.h>
int main()
{
int s1, s2, s3, s4, s5;
printf("Enter the marks of 1st subject: ");
scanf("%d", &s1);
printf("Enter the marks of 2nd subject: ");
scanf("%d", &s2);
printf("Enter the marks of 3rd subject: ");
scanf("%d", &s3);
printf("Enter the marks of 4th subject: ");
scanf("%d", &s4);
printf("Enter the marks of 5th subject: ");
scanf("%d", &s5);
if (s1>=33 && s2>=33 && s3>=33 && s4>=33 && s5>=33)
printf("\nCandidate is passed");
else
printf("\nCandidate is failed");
return 0;
}
PROBLEMS OUTPUT TERMINAL
Code
Windows PowerShell
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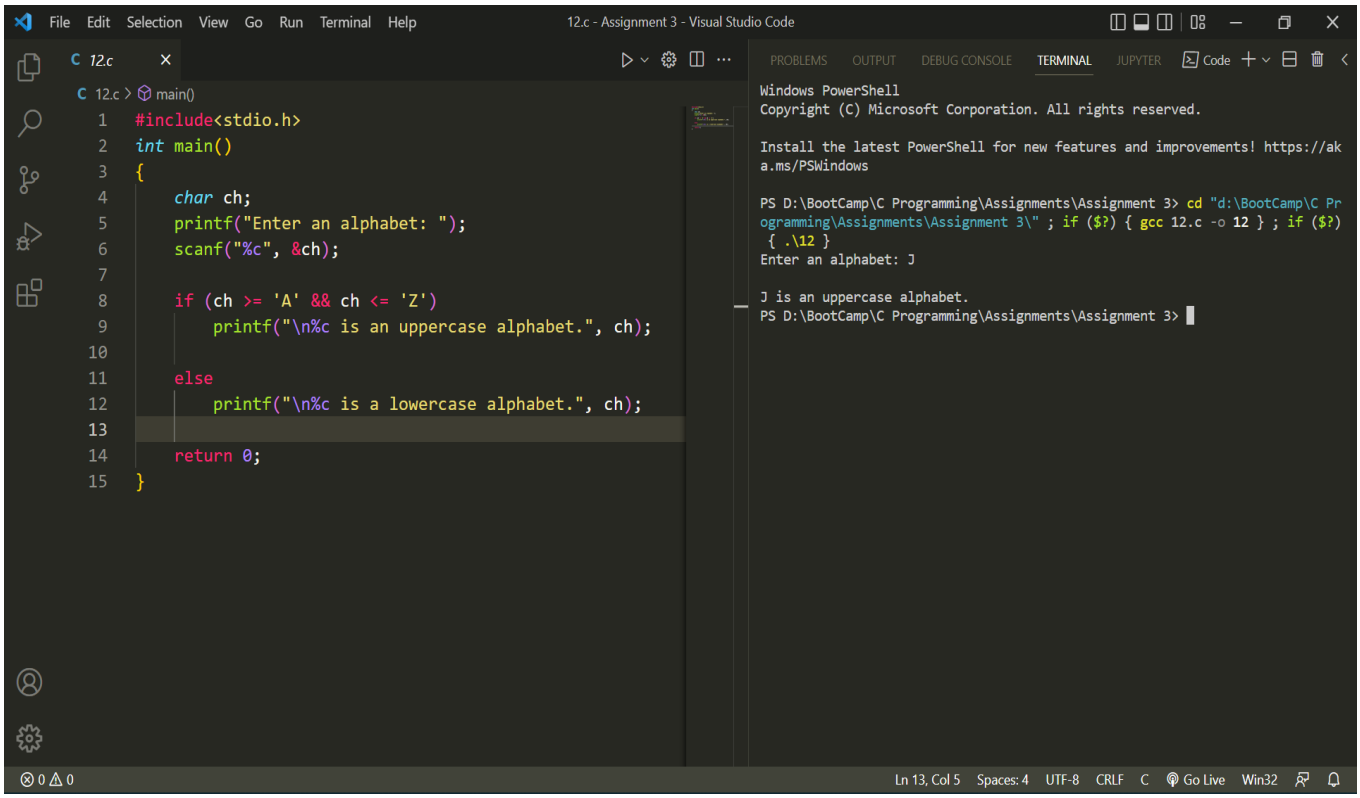
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCamp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 11.c -o 11 } ; if ($?) { .\11 }
Enter the marks of 1st subject: 45
Enter the marks of 2nd subject: 34
Enter the marks of 3rd subject: 67
Enter the marks of 4th subject: 89
Enter the marks of 5th subject: 23
Candidate is failed
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
Ln 4, Col 28 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q12.


File Edit Selection View Go Run Terminal Help
12.c - Assignment 3 - Visual Studio Code
12.c
12.c > main()
#include<stdio.h>
int main()
{
char ch;
printf("Enter an alphabet: ");
scanf("%c", &ch);
if (ch >= 'A' && ch <= 'Z')
printf("\n%c is an uppercase alphabet.", ch);
else
printf("\n%c is a lowercase alphabet.", ch);
return 0;
}
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Code
Windows PowerShell
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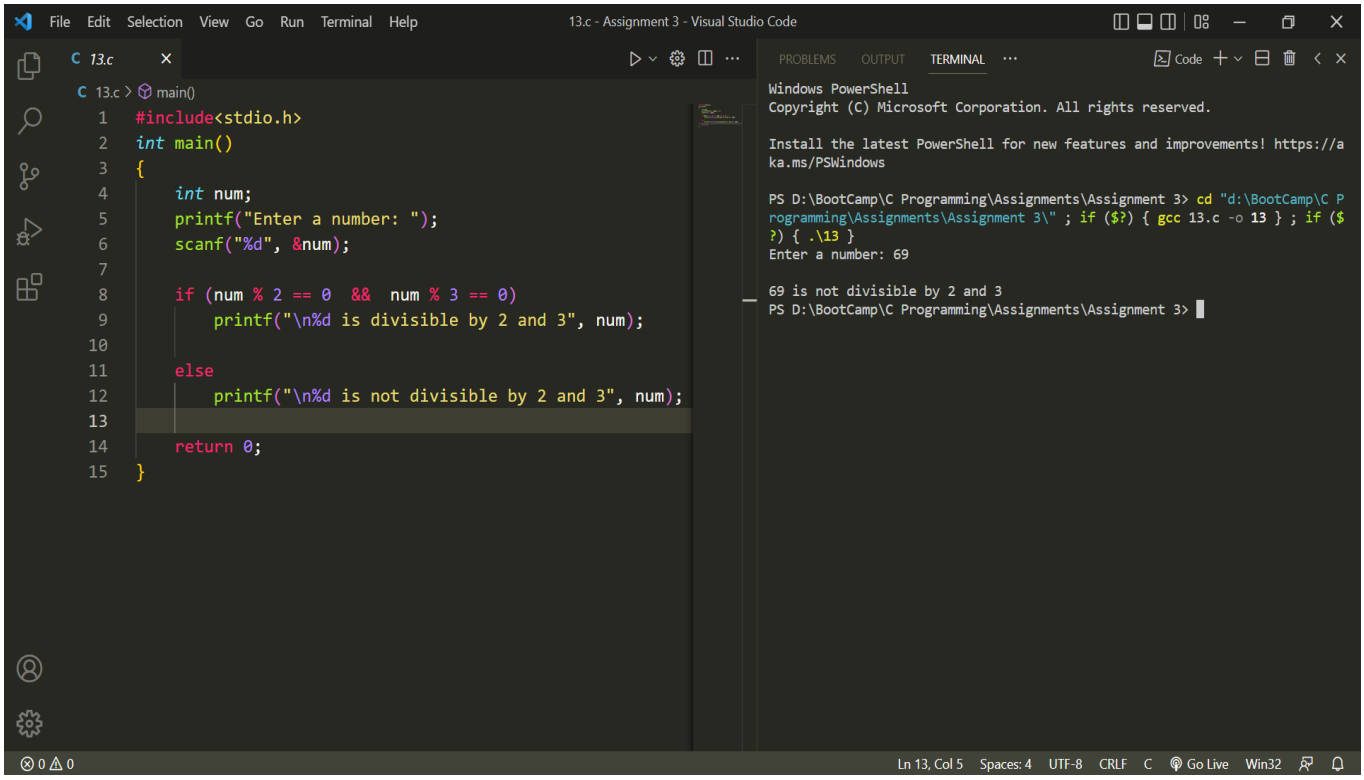
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCamp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 12.c -o 12 } ; if ($?) { .\12 }
Enter an alphabet: J
J is an uppercase alphabet.
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
Ln 13, Col 5 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q13.


File Edit Selection View Go Run Terminal Help
13.c - Assignment 3 - Visual Studio Code
13.c
13.c > main()
#include<stdio.h>
int main()
{
int num;
printf("Enter a number: ");
scanf("%d", &num);
if (num % 2 == 0 && num % 3 == 0)
printf("\n%d is divisible by 2 and 3", num);
else
printf("\n%d is not divisible by 2 and 3", num);
return 0;
}
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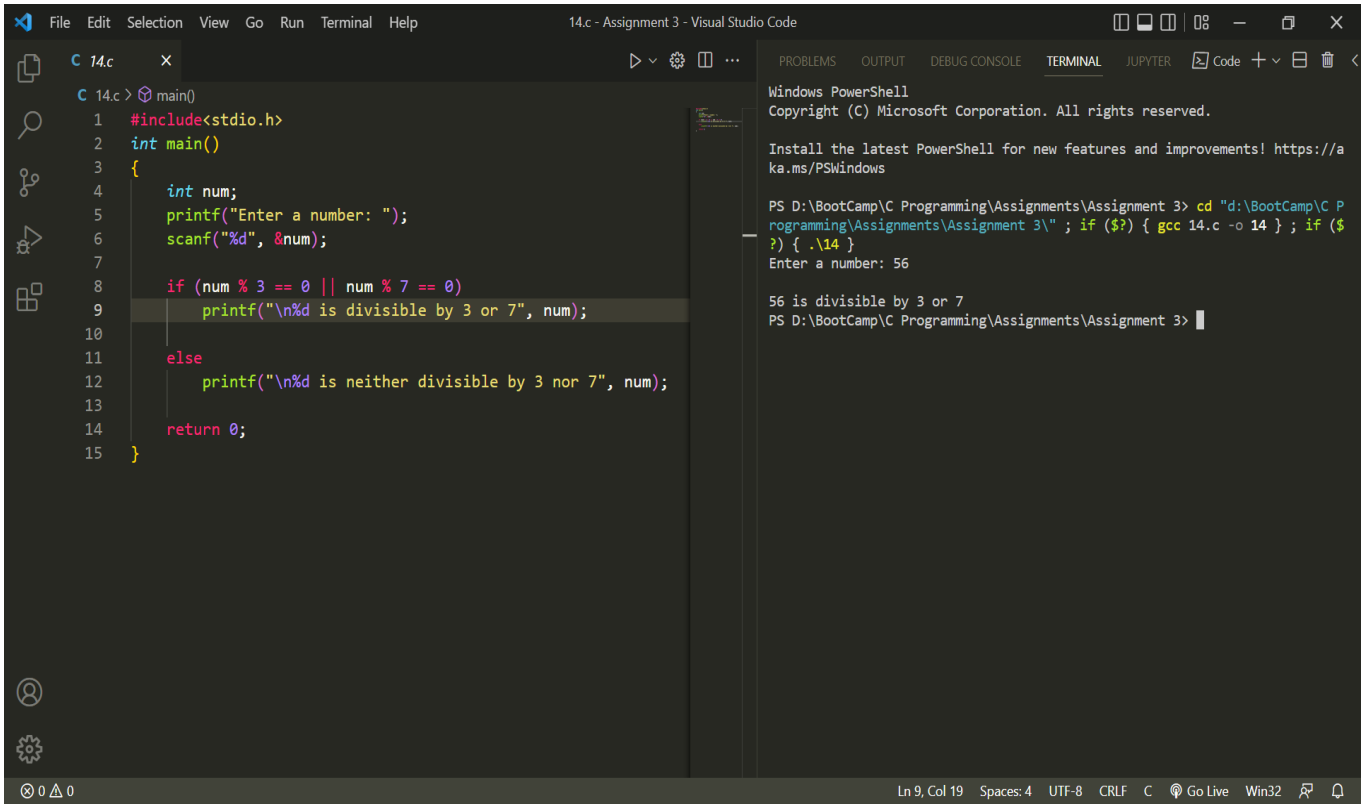
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCamp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 13.c -o 13 } ; if ($?) { .\13 }
Enter a number: 69
69 is not divisible by 2 and 3
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
Ln 13, Col 5 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q14.


File Edit Selection View Go Run Terminal Help
14.c - Assignment 3 - Visual Studio Code
14.c
14.c > main()
#include<stdio.h>
int main()
{
int num;
printf("Enter a number: ");
scanf("%d", &num);
if (num % 3 == 0 || num % 7 == 0)
printf("\n%d is divisible by 3 or 7", num);
else
printf("\n%d is neither divisible by 3 nor 7", num);
return 0;
}
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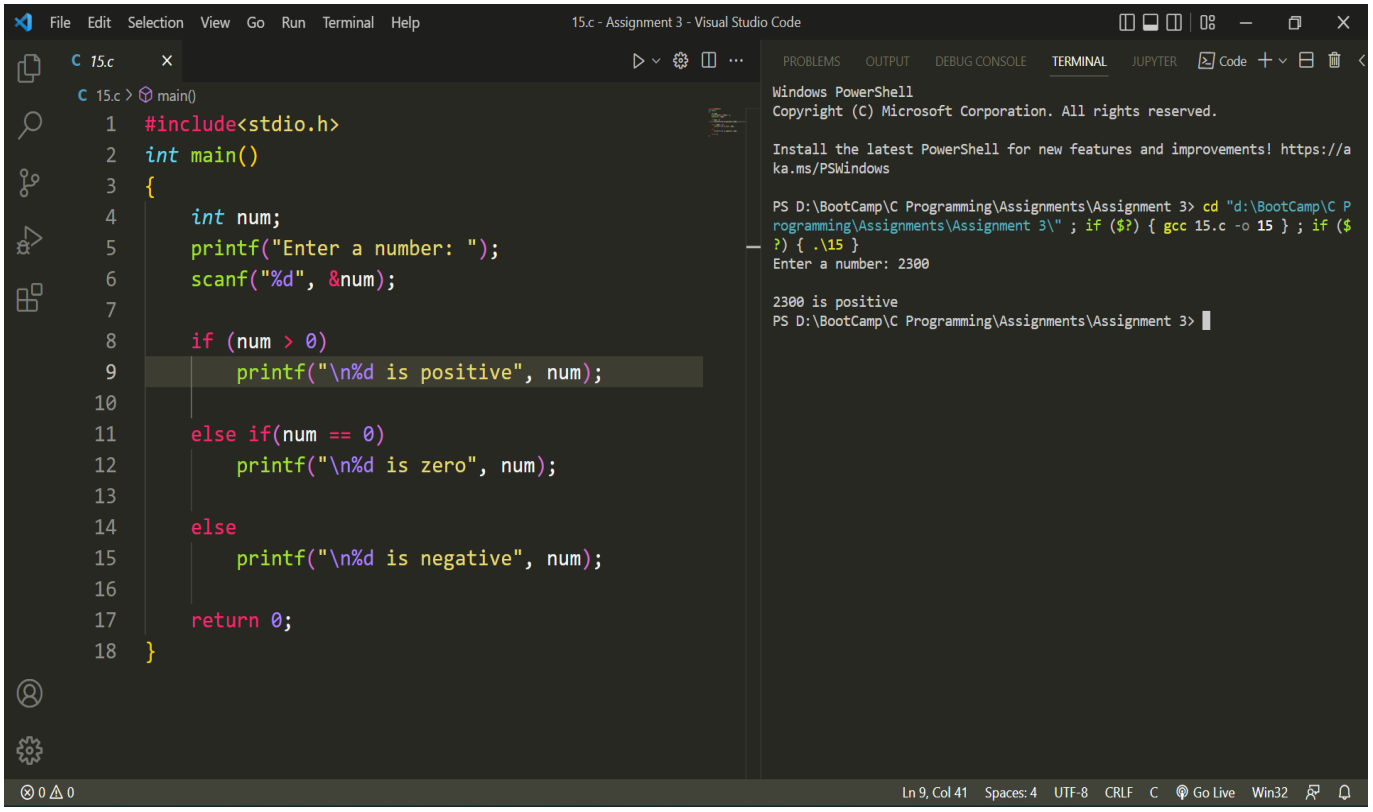
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCamp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 14.c -o 14 } ; if ($?) { .\14 }
Enter a number: 56
56 is divisible by 3 or 7
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
Ln 9, Col 19 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q15.


File Edit Selection View Go Run Terminal Help
15.c - Assignment 3 - Visual Studio Code
15.c
15.c > main()
#include<stdio.h>
int main()
{
int num;
printf("Enter a number: ");
scanf("%d", &num);
if (num > 0)
printf("\n%d is positive", num);
else if(num == 0)
printf("\n%d is zero", num);
else
printf("\n%d is negative", num);
return 0;
}
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Code
Windows PowerShell
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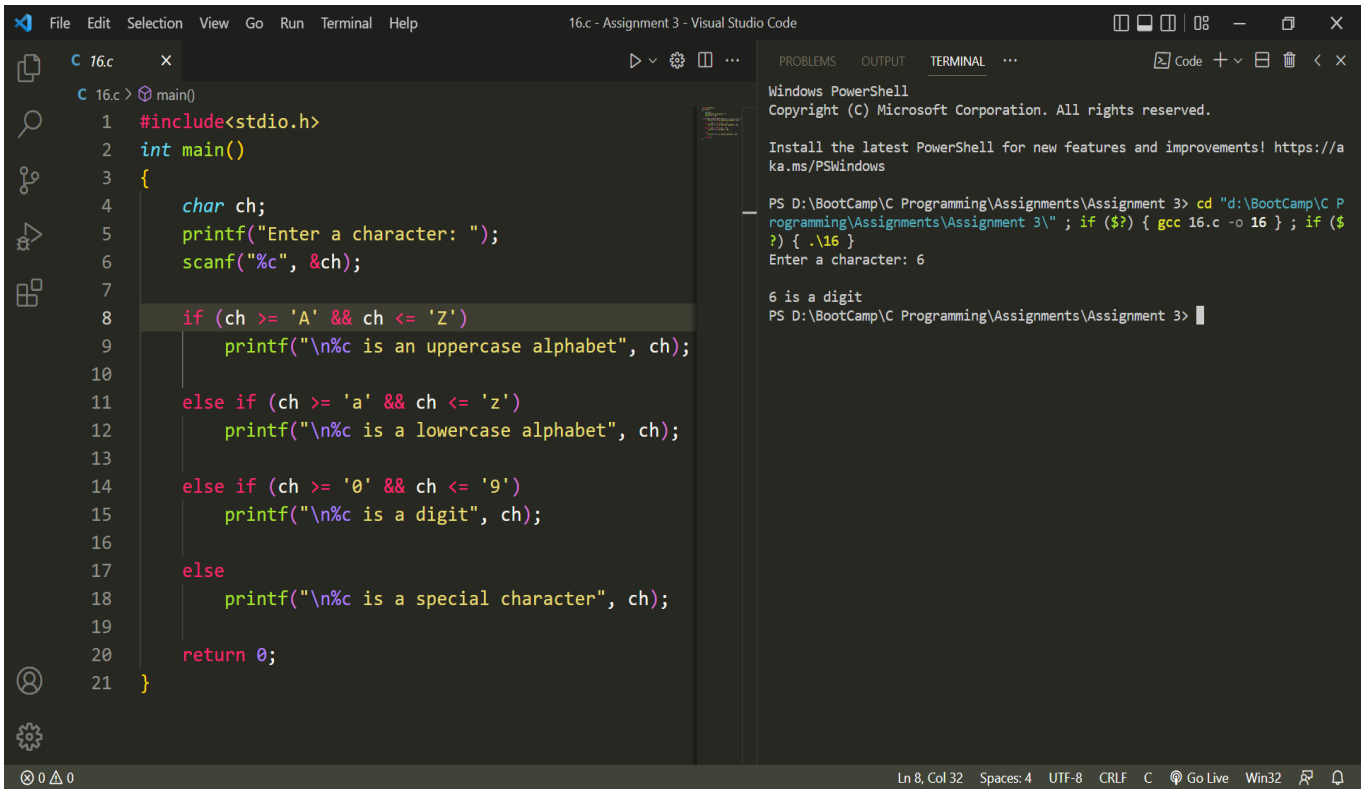
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCamp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 15.c -o 15 } ; if ($?) { .\15 }
Enter a number: 2300
2300 is positive
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
0 0
Ln 9, Col 41 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q16.


File Edit Selection View Go Run Terminal Help
16.c - Assignment 3 - Visual Studio Code
16.c
16.c > main()
#include<stdio.h>
int main()
{
char ch;
printf("Enter a character: ");
scanf("%c", &ch);
if (ch >= 'A' && ch <= 'Z')
printf("\n%c is an uppercase alphabet", ch);
else if (ch >= 'a' && ch <= 'z')
printf("\n%c is a lowercase alphabet", ch);
else if (ch >= '0' && ch <= '9')
printf("\n%c is a digit", ch);
else
printf("\n%c is a special character", ch);
return 0;
}
PROBLEMS OUTPUT TERMINAL
Code
Windows PowerShell
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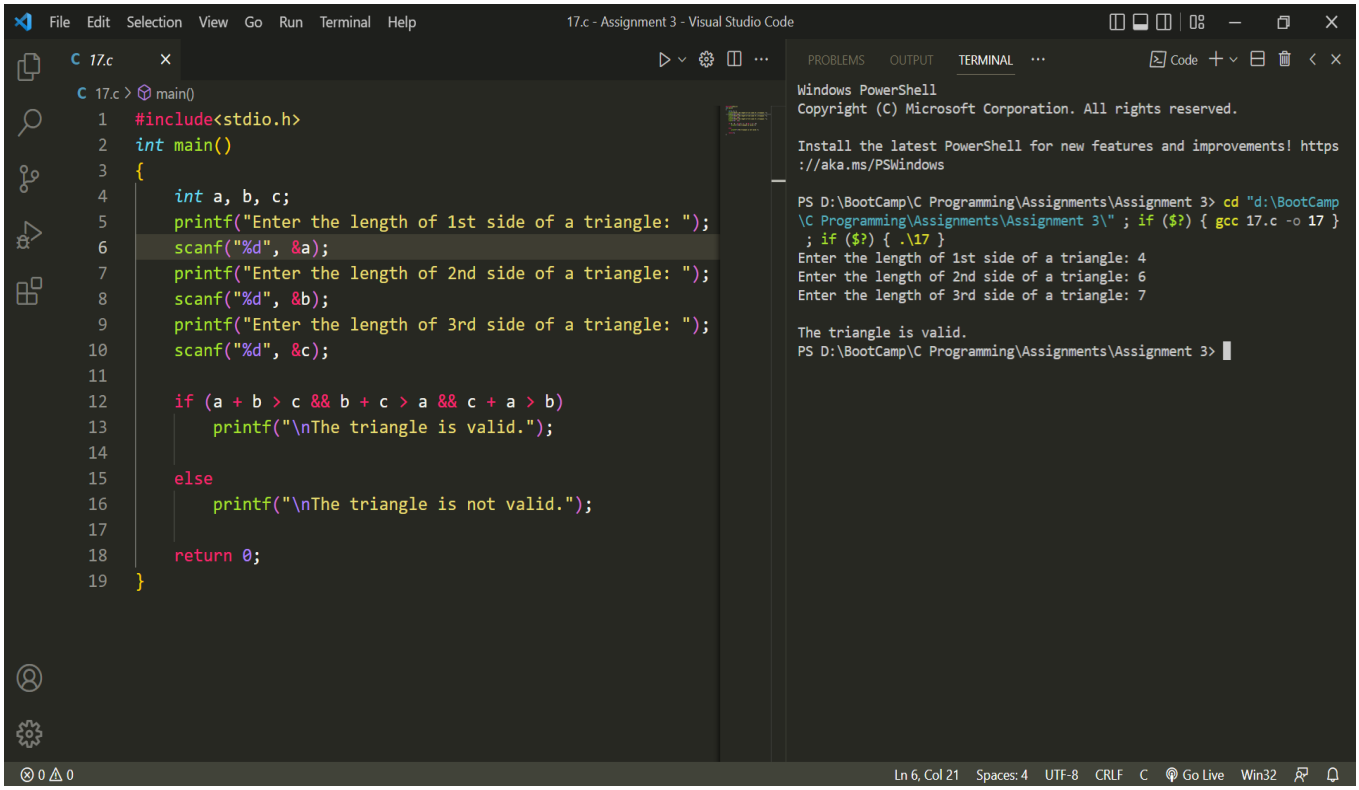
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCamp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 16.c -o 16 } ; if ($?) { .\16 }
Enter a character: 6
6 is a digit
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
0 0
Ln 8, Col 32 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q17.


File Edit Selection View Go Run Terminal Help
17.c - Assignment 3 - Visual Studio Code
17.c
17.c > main()
#include<stdio.h>
int main()
{
int a, b, c;
printf("Enter the length of 1st side of a triangle: ");
scanf("%d", &a);
printf("Enter the length of 2nd side of a triangle: ");
scanf("%d", &b);
printf("Enter the length of 3rd side of a triangle: ");
scanf("%d", &c);
if (a + b > c && b + c > a && c + a > b)
printf("\nThe triangle is valid.");
else
printf("\nThe triangle is not valid.");
return 0;
}
PROBLEMS OUTPUT TERMINAL
Code
Windows PowerShell
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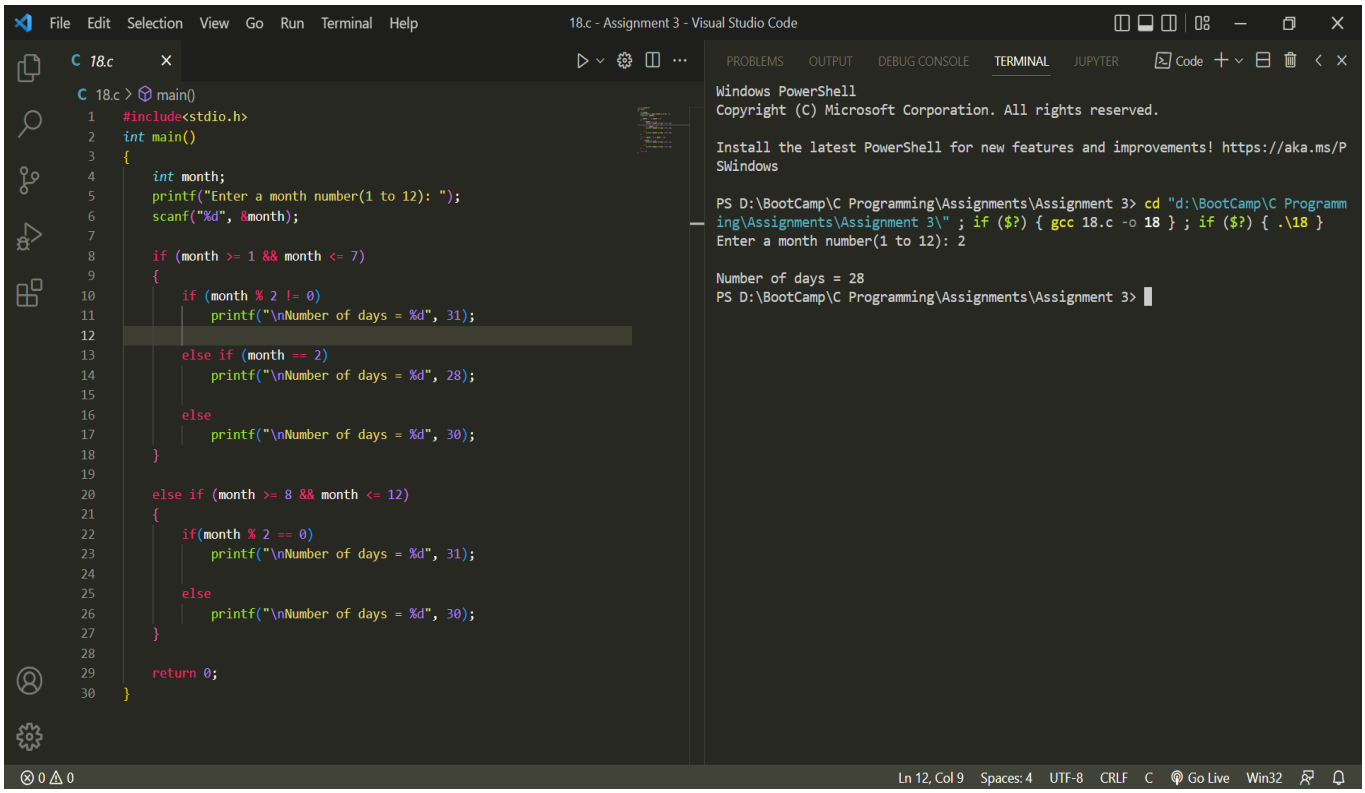
PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCamp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 17.c -o 17 } ; if ($?) { .\17 }
Enter the length of 1st side of a triangle: 4
Enter the length of 2nd side of a triangle: 6
Enter the length of 3rd side of a triangle: 7
The triangle is valid.
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
0 0
Ln 6, Col 21 Spaces: 4 UTF-8 CRLF C Go Live Win32

Q18.


File Edit Selection View Go Run Terminal Help
18.c - Assignment 3 - Visual Studio Code
18.c
18.c > main()
#include<stdio.h>
int main()
{
int month;
printf("Enter a month number(1 to 12): ");
scanf("%d", &month);
if (month >= 1 && month <= 7)
{
if (month % 2 != 0)
printf("\nNumber of days = %d", 31);
else if (month == 2)
printf("\nNumber of days = %d", 28);
else
printf("\nNumber of days = %d", 30);
}
else if (month >= 8 && month <= 12)
{
if(month % 2 == 0)
printf("\nNumber of days = %d", 31);
else
printf("\nNumber of days = %d", 30);
}
return 0;
}
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
Code
Windows PowerShell
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PS D:\BootCamp\C Programming\Assignments\Assignment 3> cd "d:\BootCamp\C Programming\Assignments\Assignment 3\" ; if ($?) { gcc 18.c -o 18 } ; if ($?) { .\18 }
Enter a month number(1 to 12): 2
Number of days = 28
PS D:\BootCamp\C Programming\Assignments\Assignment 3>
0 0
Ln 12, Col 9 Spaces: 4 UTF-8 CRLF C Go Live Win32